



INSIDE DOPE

by GEORGE F. TAUBENECK

Story of the Week
Mayor Gragg
Sharpen Your Pencils, Boys
The Surprising Mailbag
Let the Papers Pile Up

Story of the Week

Recently we reported on the visit of E. C. Raney, president of Ranco Inc., to England. One experience we didn't relate at that time was this:

Mr. Raney had attended a movie near Piccadilly Circus, and was returning on foot to his hotel. An attractive young English girl fell in step with him.

"Hello, Mr. America," she said.

Mr. Raney said, "Hello."

The young lady was informal, friendly, full of pleasant talk.

"I met a lot of fine young men from America during the war," she said, "men from New York, Pennsylvania, Ohio, California—from all over America."

Mr. Raney was non-committal.

"In fact," said the girl, "I made a bit of a mistake with one of the boys one night, and have a fine 4-year-old son to show for it."

Mr. Raney was still non-committal.

"Would you like to come up to my apartment and see what a fine boy he is?" smiled the girl.

"Oh, no thanks," said Mr. Raney. "I'm willing to take your word for it."

Her friendly manner and her pleasant smile evaporated.

"If you're not coming up to my apartment," she said angrily, "why in hell are you taking up my time?"

Mayor Gragg

L. C. Gragg, of Hussmann Refrigerator Co., finds his time well occupied these days. In addition to his full time job as purchasing agent at Hussmann, he is Mayor of the City of Northwoods, Mo. (pop. 2,000).

Mr. Gragg recalls an incident which occurred when Northwoods was merely a village and had not yet acquired the distinction of being classified as a city. An election was being held to choose five citizens of the town to act as members of the Board of Trustees. It so happened that there were six candidates, including Mr. Gragg, for the five offices.

During the days immediately following the election, Mr. Gragg heard no news of the results, and eventually assumed that he had been the one to lose. While his ego was thus deflated, he chanced to meet another of his fellow candidates, who also admitted that he had not been notified of the outcome, either.

So, their curiosities sharpened, Mr. Gragg and his acquaintance visited the City Clerk to get some definite word. Both were more than gratified to learn that they had tied for first place among the candidates and, consequently, were elected. Incidentally, the information also helped to smooth out those somewhat ruffled egos.

Later, when Northwoods became a city, Mr. Gragg was chosen as its first mayor. He still holds the post.

Sharpen Your Pencils, Boys

Population trends in the United States and their over-all effects have been analyzed by the National Industrial Conference Board lately.

The increase in our population has "surpassed all expectations," the report declares. The current figure hovers somewhere around the 144,000,000 mark.

Statisticians consistently have refused to concede that the peak of our country's population could exceed

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War Talk Should Wake Up
Home Freezer Dealers

(An Editorial)

WORLD WAR III apparently has been inevitable ever since the Russians showed their true colors at San Francisco when the United Nations was organized. They demonstrated then—and have confirmed ever since—that they held no truck with peaceful international cooperation, but were bent on world domination.

The only question in our minds has been: When? At first we figured that World War III might be 15 or 20 years away. Then, a year or so ago, we set the fatal date ahead to the early 1950's. Now, it seems, the Last Showdown is only two or three years away. It could begin next fall—a matter of months—but it probably won't, because the Russians simply can't support a large-scale war. They're too vulnerable, too badly wrecked, too poor, and too inept to challenge us. World War III may not occur during the lifetime of any reader of this editorial. Devoutly, we all hope it won't. Chances are fair that it may not. Nevertheless, this is true:

The American people seem far more resigned and reconciled to this one—and eager to get on with it—than they were to World War II. Wherever you go, to whomever you talk, you hear:

"All right. It's coming for sure. Let's get it over with, and soon. Let's use our stockpile of atomic bombs, and our not-so-secret bacteriological weapons, while we have a manifest advantage. We licked three of 'em last time—Germany, Italy, Japan—and we can beat the stuffing out of the fourth dictatorship this time if we don't wait too long."

Maybe these bloodthirsty citizens are right.

It's entirely possible that a show of force and determination on our part will halt Russian expansionism. According to nearly all reports, the Communist Fifth Columns are more potent than the Russian military potential. Perhaps a show of military might on our part will outbluff the Communist bluffers; and then war can be avoided.

But the point to remember is: *the American people believe that war is coming soon.* As usual, they're ahead of their elected representatives in their interpretation of the news.

What does that fact mean to the specialty appliance dealer? Here

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George Romney Takes RSES-REMA Offer
Nash-Kelvinator Post Western Program

DETROIT—George Romney has resigned as managing director of the Automobile Manufacturers Association to become assistant to the president of Nash-Kelvinator Corp., George W. Mason, company president, announced.

Romney's responsibilities as a Nash-Kelvinator executive will include both the electrical appliance and automotive divisions.

He has been associated with AMA for the past nine years. Named Detroit manager of the association in 1939, he was elected managing director early in 1942.

During World War II, Romney also

Giving Away Appliances
Brings Lottery Charge

ST. LOUIS—That "stunt promotions" to accelerate the sale of major appliances must be carefully engineered to stay outside of the "lottery classification" was graphically demonstrated here during March, when Hampton Electric Co., huge appliance dealership, was forced to abandon an "open house" promotion.

The Hampton Electric Co., formerly an electrical contracting organization, and now one of the biggest appliance dealerships in the midwest, planned to give away a long list of major appliances as part of its

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SAN FRANCISCO—Official program for the RSES-REMA West Coast Educational Exhibit and Conference to be held April 30-May 2 in the Palace hotel here has been released by the San Francisco committee.

The exhibit hall will be officially opened at noon on Friday, April 30. It will be open until 10 p.m. that day, from noon until 6 p.m. May 1, and from noon until 5 p.m. May 2.

(Fifty-two companies had signed up for exhibit space as of March 29, according to a report from REMA.)

Opening of educational sessions is scheduled for 9:30 a.m. May 1.

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Bess, of Refrigeration
Corp., Resigns Presidency

NEW YORK CITY—John M. Bess has resigned as president of Refrigeration Corp. of America.

Commenting on his plans for the future, Bess indicated that they would lead him into "new paths" but that he would continue to take an interest in the affairs of the company.

"One reason for this is the fact that I remain as a director of Noma Electric Corp. of which Refrigeration Corp. of America is a subsidiary," said Bess. "Another reason is that Harvey Farber, who has been associated with me for more than 14 years, has been appointed vice president."

2 Ovens Featured
In Westinghouse
'48 Electric Ranges

MANSFIELD, Ohio—Five new Westinghouse electric ranges, which feature double oven models in both deluxe and medium price brackets and which can be sold by dealers from a basic display of three ranges, have been announced by R. M. Beatty, manager of the range department, Westinghouse Electric Appliance division here.

The five are the deluxe Commander in both single and double oven, the medium priced Champion in both single and double oven, and the low priced Commodore in single oven only.

The 1948 Westinghouse line will introduce the new "jet age" metal, titanium steel, on the cooking surface tops, Beatty asserted. Production of these tops will be limited throughout the year, however, because supplies of titanium and the special porcelain enamel finish for it will be limited, he declared.

Also featured in the line are a

(Concluded on Page 4, Column 4)

Frigidaire Changes Line, Staff

Distributors' Convention
Previews New Products

DAYTON, Ohio—An advance showing of Frigidaire's new appliance, commercial, and air conditioning product lines for 1948 was staged for more than 400 key sales and service executives from 45 Frigidaire U. S. districts and 14 foreign countries during an international distributors' convention which opened here March 31.

P. M. Bratten, general sales manager, described the new lines as the most extensive in company history. He said public announcement of them would be made immediately after their presentation to the dealer organization in April.

Advertising and selling plans were presented, according to Bratten, on the basis that business is now facing normal selling conditions and that there is an important need for top salesmanship in the continuing success of the salesman, dealer, distributor, and manufacturer.

"Ever since the war it has been a battle of production," he said. "But now we must move forward on the merits of our salesmanship."

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G-E Cuts Own Fair
Trade Prices—Dealer

NEW YORK CITY—Contending that the General Electric Co.'s fair traded prices on small appliances are discriminatory against retailers, the Monarch-Saphin Co. here has asked the Supreme Court of New York County to set aside an action by the manufacturer to enjoin eight local dealers from selling its merchandise at less than fair-trade prices.

Monarch-Saphin, one of the dealers accused, alleged that G-E itself and its distributors sell these appliances, at retail, below the minimum prices they have set.

Monarch-Saphin requested the court that if the action was not dismissed, it be allowed to examine the books of both the manufacturer and the General Electric Supply Corp. to determine the extent of G-E's retail business and the prices at which they were selling their own and other branded merchandise.

The dealer maintains that G-E, "by

(Concluded on Page 4, Column 5)

Detrola 'Loans'
For Steel Told
To CongressmenAppliance Mfrs.' Contracts
Explained by Feldman

WASHINGTON, D. C.—Major companies in the appliance industry made front-page news in daily newspapers last week as the result of "revelations" made by one of them before a congressional committee investigating alleged gray market activities in steel.

"Detroiters Bares Fantastic Deals" was the headline one newspaper used over the story, most details of which had actually been published nearly two years ago as a matter of course in the company's annual financial statement.

C. Russell Feldman, president of the International Detrola Corp., parent company of Universal Cooler and other firms, reportedly told the committee how several other appliance

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E. R. Godfrey Heads List of
Major Staff Appointments

DAYTON, Ohio—E. R. Godfrey, vice president of General Motors Corp. and general manager of the Frigidaire Division, has been appointed group executive in charge of the Dayton and Household Appliance Divisions of the corporation, C. E. Wilson, GM president, announced.

Godfrey, who will make his headquarters in Detroit, was succeeded as general manager of Frigidaire by Mason M. Roberts, formerly factory manager of the division. R. V. Polen, who was assistant factory manager, succeeded Roberts.

GM Vice President B. D. Kunkle, formerly group executive in charge of the Overseas, Canadian, Dayton, and Household Appliance group, continues as group executive of the Overseas and Canadian operations. In addition, he will have other special assignments.

Appointments were effective the first of April.

During the week, Frigidaire also announced changes in the organizational structures of its appliance sales and commercial refrigeration and air conditioning sales departments and executive appointments and personnel transfers in these departments.

Changes in the structure of the appliance sales department and appointment of two new section sales

(Concluded on Page 4, Column 1)

Mills Creditors To Hold
First Meeting April 19

CHICAGO—First official meeting of the creditors of Mills Industries, Inc. will be held on April 19, though the time and place have yet to be set, the creditors' committee announced last week.

The committee also stated that creditors would receive with their notice of meeting the original plan of settlement proposed by Mills, but the committee did not recommend that this plan be accepted.

On the agenda of the April 19 meeting is the election of an official creditors' committee. Once established, this committee will work toward the formation of a plan that could be recommended to the creditors, it was said.

(Concluded on Page 33, Column 3)

Air Conditioning Sales Methods Stressed by G-E

BLOOMFIELD, N. J.—Marketing executives and product specialists from the General Electric Co.'s Air Conditioning Department met with district and local office staffs from New York, Boston, and Philadelphia at the Department headquarters in Bloomfield, March 24 and 25 in the first of three conferences held throughout the country to consolidate marketing techniques.

The theme of the meetings, "Planned Action," emphasized effective selling techniques for Air Conditioning and large refrigeration equipment.

General Electric officials who explained the various phases of the program included W. F. R. Karsten, R. U. Berry, J. P. Turner, and W. Bamert. All are from the Bloomfield headquarters of the Air Conditioning Department.

Meetings were also held in New Orleans April 2 and 3, and in Chicago April 5 and 6. The New Orleans meeting included G-E Air Conditioning Department district and local offices in Atlanta and Dallas. Representatives from Chicago, Cleveland, and Kansas City attended the Chicago meeting.

S. W. Blanton Manages Delco Division Branch In Cleveland

DAYTON, Ohio—With the recent opening of a Cleveland office, Delco Products Division of General Motors Corp. now has five branch sales offices throughout the country.

The Cleveland office, under the management of S. W. Blanton, is in the Terminal Tower building. Other offices are located in Detroit, Cincinnati, Chicago, and Hartford, Conn.

Firm Offers Priority Service To Flood-Damaged Refrigerators

JOHNSON CITY, N. Y.—During the recent flood emergency in the Binghamton area, Reliable Refrigeration here offered priority service to owners of refrigerators damaged by flood waters.

Egan In Bendix Eastern Post

NEW YORK CITY—Joseph F. Egan has been promoted from New York division manager to eastern regional manager for Bendix Home Appliances, Inc. He will continue to act as New York division manager, according to W. F. Linville, general sales manager.

Bureau Hits Careless Use Of 'Sale' In Advertising

NEW YORK CITY—The word "sale" as used in advertising conveys to the public the idea that merchandise is being offered at a price concession and when such is not the case its use is misleading to the public and unfair to other advertisers, the National Better Business Bureau declared recently.

"The public has a right to believe that each item listed under a 'Sale' heading is being offered at a reduced price, or price concession, unless the advertising clearly indicates that specific items have not been reduced," the Bureau stated.

"When the price of an article that continues in production in identical form is permanently reduced, its offering at the new price does not constitute a 'sale,'" the Bureau explained. "However, style items which are reduced in price for clearance purposes, or models and articles which are being discontinued either by the manufacturer or distributor, or both, may be advertised under 'sale' headings.

"Consumers respond favorably to 'sale' offers because they believe savings are possible during the 'sale,'" it added.

Rails Cite Huge Food Losses Due to Handling, Distribution

BUFFALO—Of the 50,000,000 tons of perishable foods shipped by railroads annually, about 20,000,000 tons are destroyed as unfit for human consumption because of improper handling and distribution, Robert A. Fasold, special representative of the Freight Claim Division, Association of American Railroads, disclosed at a recent meeting of the Central Railway Club of Buffalo.

Fasold was one of seven speakers representing both railroads and shippers participating in a roundtable discussion on ways and means of reducing the annual cost to the roads, and to some extent the shippers, of improper handling and transportation of foodstuffs.

Fire Closes Appliance Store After 11 Days of Business

SYRACUSE, N. Y.—The American Home Furnishings Co., an appliance store at 1027 Willis Ave., opened March 15, was swept by fire March 26 and destroyed. An estimate of the loss was not immediately available. The business block, in which the store was located, had only recently been remodeled.

Elimination of Food Waste Seen as Role of Refrigeration In Crisis

RICHMOND, Va.—A major role in saving millions of human beings from starvation was predicted recently for this country's refrigeration industry.

That opinion was heard by delegates to the first annual convention of the Virginia State Association of the Refrigeration Service Engineers Society in Richmond, Va.

"We save food because we in the industry prevent spoilage of food," said the speaker, Rollin N. Israel of the Virginia Smelting Co.

"There is a shortage of food in the world, even right here in America where we all said it couldn't happen. 'Oh, well,' somebody says. 'So what, it's only temporary; we're sending too much food across the seas.' Want to bet? Just ponder this:

"The world population is two and a quarter billions. The tillable land area is four billion acres. Economists claim that it requires two and a half acres of land per person for an adequate supply of food and clothing.

"Right now there are only 1.77 acres of arable land per person. It is estimated that from one to one and a quarter billion acres can be added to the total tillable acreage, but it's doubtful whether it can be put under production at a rate that will keep pace with the population increase—20,000,000 per year.

"Moreover, our lands now under cultivation are steadily losing their productivity. They are sterilized by wind and water erosion. Every 24 hours unchecked erosion carries away the equivalent of 200 of our best 40-acre farms.

"If food supplies cannot be produced in greater quantity, waste must be eliminated. The art of conserving, preserving, and transporting food stuffs must move closer to perfection.

"Here in this world food emergency has shaped the magnitude of our responsibilities and of our opportunities. Refrigeration may play a big part in saving millions of lives."

Lee C. Leslie Succeeds Sprague As Head of Baker Ice Office In St. Louis

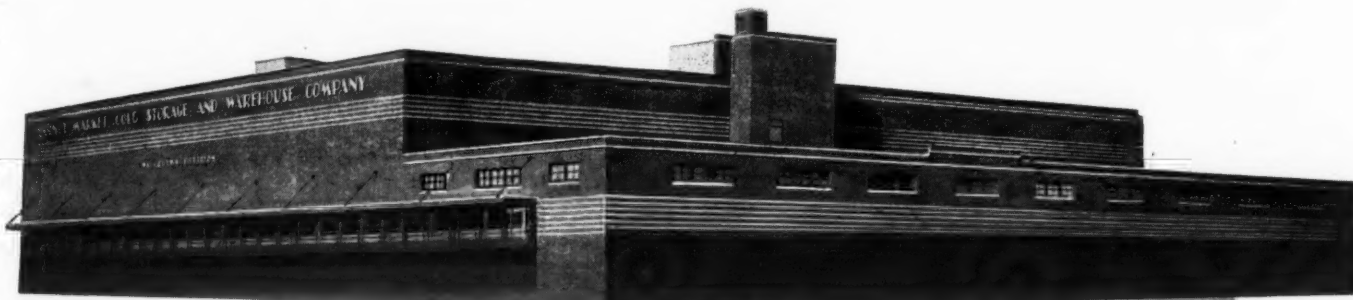
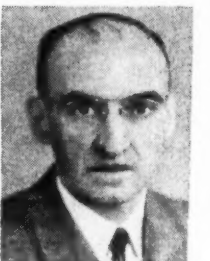
SOUTH WINDHAM, Me.—The Baker Ice Machine Co., Inc., has announced the appointment of Lee C. Leslie as district manager in charge of the company's St. Louis office.

Leslie succeeds Roger Sprague, who has been transferred to the home office in South Windham as special representative.

A registered professional engineer, Lee C. Leslie (Pa.), Leslie comes to Baker after many years of experience in the refrigeration and air conditioning industry. He was born in Rio de Janeiro of American parents and sent "home" to the States at an early age for his education, graduating from Lehigh university and serving his apprenticeship in the test shops of Westinghouse Electric.

Practically all of his working years have been spent in refrigeration from the early days of low-pressure commercial machines through ice plant construction and as construction superintendent, application engineer, branch and staff manager.

Numerous articles by Leslie have appeared in refrigeration and air conditioning magazines. He is the author of Chapter 10 of the 1947 A.S.R.E. Data Book and Section 27 of Refrigeration Engineering Application Data.



LARGEST MINUS 15° F. FROZEN STORAGE WAREHOUSE INSULATES with ALUMISEAL

1,300,000 CUBIC FEET ENVELOPED IN ALUMISEAL TO SEAL OUT MOISTURE—SEAL OUT HEAT!

The Quincy Market & Cold Storage Warehouse Company, Boston, Massachusetts, and their Architects and Engineers, Ganteaume & McMullen, are prominent in their respective fields. That they specified Alumiseal for Quincy's new storage plant at Watertown, Massachusetts, reported to be the largest structure of its kind, is news of great significance in the refrigeration industry. Here are a few reasons for selecting Alumiseal as the Insulation and Vapor Barrier in any refrigerated structure—freezers, coolers, hardening rooms, bulk storage, locker plants, etc.:

1. Alumiseal seals out both moisture and heat. Alumiseal combines solid aluminum sheets (not a foil or paper) of high heat reflecting alloy in a highly efficient insulation construction with heavy Lead-Faced Vapor-Proof Tape, sealing all joints of the Vapor Barrier Sheet. Alumiseal is rust proof. It's a combination heat or moisture cannot master. And, no deterioration... with Alumiseal, you only insulate once.
2. The insulating properties of Alumiseal cannot be surpassed. Alumiseal reflects 95% to 97% of radiant heat... permanently. A sheet of Alumiseal with adjacent air spaces is equivalent to more than one inch of standard mass types of insulation.
3. As a vapor barrier, the combination of rust proof Alumiseal sheets with all joints sealed by heavy Lead-Faced Vapor-Proof Tape is outstanding in effectiveness and permanence.
4. Alumiseal is sanitary, vermin proof and positive in fire resistance. Thinner walls, possible with Alumiseal, increase pay space.

Write for full information on what Alumiseal can do for your specific problem.

WANT TO SEE A SAMPLE?

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New York 17, N. Y.

Gentlemen:
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ADDRESS _____



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Specify
DAVISON PA 100
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SILICA GEL

in factory-charged
dryers bearing
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PA 100 is your guarantee of all-around, superior performance
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ONLY 100% METAL CONSTRUCTED STAINLESS STEEL LINE OF REFRIGERATED CASES



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First, because Victory Metal Manufacturing Corporation's designers, engineers, and skilled craftsmen are giving you for 1948 the first 100% all-metal constructed cases with streamlined stainless steel beauty.

First, because "VIMCO'S" Refrigerated Cases are precision built of 100% metal—inside and out—not a sliver of wood is in their construction.

"VIMCO'S" 1948 Cases are scientifically engineered to give practical, economical service to an unlimited extent.

"VIMCO'S" 1948 Refrigerated Cases have many other outstanding and practical features including—

- ★ Welded Throughout
- ★ All Rounded Outside Corners
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- ★ 20 U. S. S. Gauge 18-8 Stainless Steel, Inside and Outside

You'll want complete details of the "VIMCO" line. Write or mail coupon for catalog and a copy of "VIMCO'S" Lifetime Guarantee applying to every "VIMCO" Case.

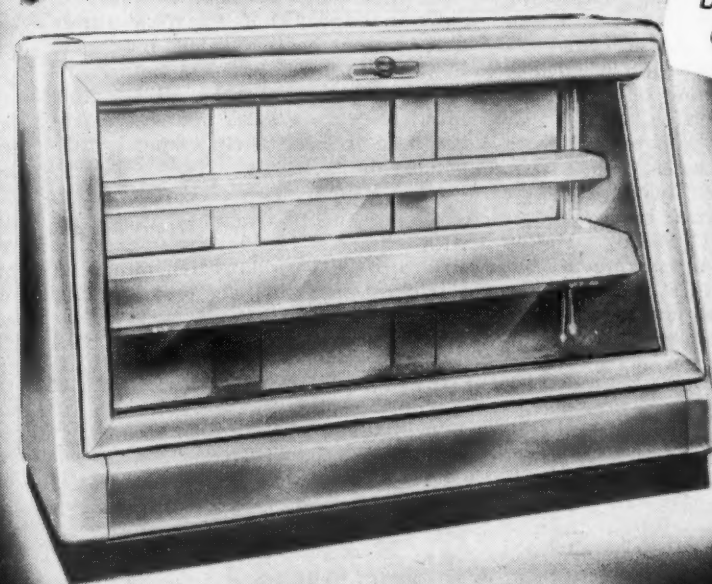
Victory METAL MANUFACTURING CORP.
1300 S. FRONT ST., PHILA. 47, PA. • FUlton 9-3132

Export Division, 39 Broadway, New York 6, N. Y.
Direct Factory Representatives in all principal cities

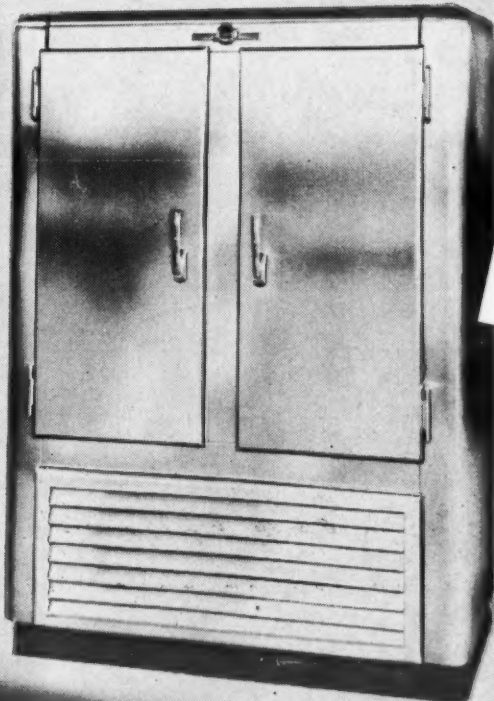
MODEL
NO. CSU-48
Combination
Sandwich Unit
and
Toaster Stand
48" Long.



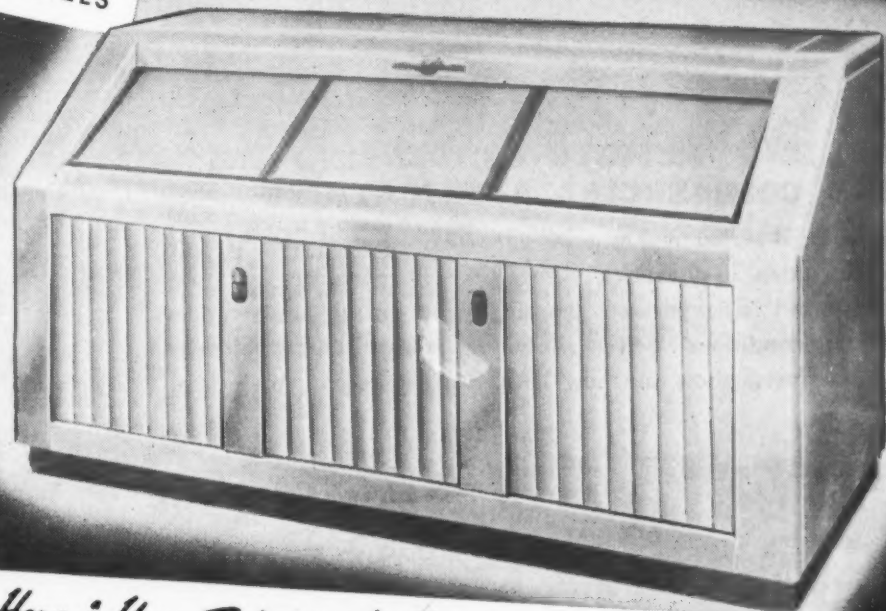
6 FT.
FULL
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sizes...
20 cu. ft.; 30 cu.
ft.; 42 cu. ft.;
47 cu. ft.; 65 cu.
ft.; 70 cu. ft.,
and 98 cu. ft.



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Please send
Catalog of
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Frigidaire Personnel Changes



P. W. BUDWORTH

H. A. BECK

B. C. WAGNER

Godfrey Heads Appointment List--

(Concluded from Page 1, Column 5)
managers were announced by H. M. Kelley, appliance sales manager.

C. H. Glenny, formerly major dealer division manager, has been named manager of a newly-created quantity sales division. Replacing Glenny as manager of the major dealer division is J. M. Rushton, formerly head of public utility sales, which will now operate as a part of the new division.

George Plumly, formerly with kitchen cabinet sales, has been transferred to the special markets division to supervise home freezer sales, replacing D. C. McCoy. McCoy will work on special assignments out of the office of H. F. Lehman, assistant general sales manager.

Appointed as assistant to the appliance sales manager, a new posi-

tion, is W. R. Miller, who formerly supervised quantity sales. W. H. Smith, has been transferred from the tax and insurance section of the comptrollers division to quantity sales to assist Glenny.

C. E. Quigley, special markets sales manager; C. J. Prashaw, range and water heater sales manager; F. M. Mitchell, laundry equipment sales manager, and D. W. Horton, kitchen cabinet sales manager, will continue to head their respective divisions under Kelley.

Nine new executive appointments and personnel transfers, together with changes in the organizational structure of Frigidaire's commercial refrigeration and air conditioning sales department were announced by W. F. Switzer, commercial sales manager.

Switzer said that the changes complete a reorganization program of the commercial sales department that has been underway for some time to prepare for increased sales.

The department will function with five sales sections, namely: Ice Cream Cabinet, Air Conditioning, National Business, Special Applications, and a new Commercial Product Sales section. The latter will include general commercial, water, and beverage cooler, farm, locker, and case and fixture sales.

H. A. Beck, formerly ice cream cabinet sales manager, has been named assistant to Switzer.

Replacing Beck as ice cream cabinet sales manager is P. W. Budworth, formerly director of government contracts in Washington, D. C.

Byron C. Wagner has been appointed manager of the new commercial product sales section. Wagner has a 17-year background in engineering, sales merchandising, and service fields.

Appointed assistant commercial product sales manager is G. H. Ewing, formerly manager of case and fixture sales. Ewing has been associated with the company for 25 years. Two other new members of product sales are R. A. Blakelock and Charles Purnhagen, both transferred from the product applications section.

Personnel changes and an expanded operation were also announced by Switzer for the product applications section, which is headed by Manager G. A. Hayner. J. A. Smith, formerly manager of farm and locker sales, will serve as assistant manager of product applications. L. E. Smith, formerly manager of water and beverage cooler sales, has also been assigned to the product applications section staff.

Westinghouse Features Twin Oven--

(Concluded from Page 1, Column 4)
fourth full-size Corox unit on deluxe models and a warming drawer unit as standard equipment on the deluxe, single oven model. The warming drawer unit will be available as an accessory on the medium and low price ranges.

A new built-in timer is standard equipment and a new feature on the medium priced model. The use of more chrome trim for exterior styling and easy-grip door handles is noted on all models.

Two range accessories added to the line are a portable Econo-Cooker and a pressure pan insert for both the deep well and portable Econo-Cookers.

The deluxe range, the Commander, is equipped with two 8 in. and two 6 in. Corox surface units governed by a five-speed heat control. The addition of the fourth unit to the range is said to increase surface capacity by more than 47%.

It also is equipped with a "Menu-Master" broiler that can be used for roasting, baking, or surface cooking as well as for broiling. The single oven model comes with a warmer drawer in place of the second oven. Both ranges are illuminated by a 24 in. fluorescent platform light.

Suggested retail price for the double oven Commander is \$344.95 and for the single oven unit, \$299.95.

As an accessory to this range, at a suggested price of \$20, the new portable Econo-Cooker is being supplied, according to Beatty. The cooker has a full 6-qt. aluminum insert pan and a built-in temperature control, he said. It can be used for baking, stewing, deep fat frying, pasteurizing, and sterilizing. It becomes fully automatic when utilized with the automatic convenience outlet on the Commander range and can be used to prepare a complete meal automatically.

Actually, this cooker adds a fifth unit to the range, Beatty explained. When the cooker is used with all the other cooking facilities of the double oven Commander, the range can prepare a complete dinner for as many as 50 persons at one time.

The Econo-Cooker can be sold as separate equipment for use in homes, at summer camps, or wherever alternating current is available and auxiliary cooking is required, he stated.

The medium priced range, the Champion, was described by Beatty as "an outstanding dealer value." The double oven unit, carrying a suggested retail price of \$299.95, features a large "True-Temp" oven big enough to prepare a complete dinner for 12 persons at one time. The second oven is large enough to hold three 8-in. cake pans at one time.

Other features of the double oven Champion include three Corox surface units, a large capacity deep well "Econo-Cooker," a built-in oven timer, an automatic convenience outlet, an incandescent platform light, oven signal light, aluminum broiler pan, two roller-type aluminum storage drawers, and the new, easy-grip chrome door and drawer handles.

The single oven Champion is identical to the double oven model except that it has another storage drawer in place of the second oven. Its suggested retail price is \$249.95. A unit to convert the large storage drawer into a warmer drawer is available as an accessory.

Fifth range in the 1948 line is the economy Commodore. The body and oven of this range are the same size and type as the body and oven on the more expensive models. It has three Corox surface units, a large capacity

deep well "Econo-Cooker," a convenience outlet, white molded plastic door and drawer handles with chrome trim, and three slide-type steel storage drawers. Suggested retail price on the Commodore is \$184.95.

All ranges in the line are equipped with the Westinghouse Tel-A-Glance switches, concealed oven vents, new ebonized monel metal drip pans beneath the Corox surface units, the single dial oven control, and aluminum crumb trays.

Available as accessories are a unit to convert the large storage drawer to a warmer drawer, an oven timer, an incandescent platform light, a pressure cooker, and a pressure cooker insert for the deep well and portable Econo-Cookers.

Because the double oven models are identical, except for the extra oven, to their single oven counterparts, dealers can sell the full line from only three display models, Beatty emphasized. This gives major account stores easier inventory control and enables dealers with temporarily limited display space or finances to maintain high volume range sales, he stated.

Beatty asserted that the full line will be promoted by a complete program of advertising and sales training materials. This includes, he said, full page national magazine advertisements in four colors, "Sell Yourself" displays, selling books, consumer folders, promotion guides, a new recipe book with more than 200 range recipes, scripts for home and store demonstrations, and a sound motion picture.

The motion picture, with Ted Malone as narrator, is a combination consumer sales and sales training film in color. It runs 24 minutes.

Warren Heads Oakland Zone for Nash-Kelvinator

DETROIT—Promotion of James A. Warren, Jr., from assistant Kelvinator zone manager at Chicago to zone manager at Oakland, Calif., was announced by C. T. Lawson, vice president in charge of Kelvinator sales, Nash-Kelvinator Corp.

Warren replaces F. B. Posthuma, who resigned recently.

Warren joined Kelvinator in 1945 as field representative at Detroit for the Leonard Division. He became household sales manager of the Chicago zone, under H. A. Dahl, zone manager, in 1946.

C. J. Bachman, Pacific Coast regional manager, said Pacific regional and Oakland zone offices are now located in a new building at 2325 East 12th St., Oakland.

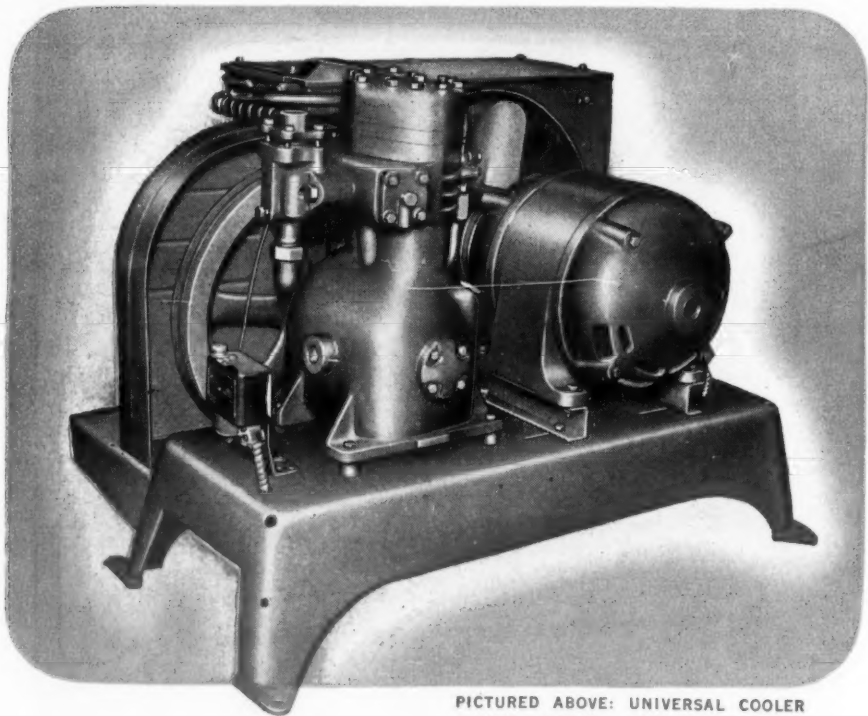
G-E Prices--

(Concluded from Page 1, Column 4)
its own actions brought about a competitive situation which has forced businessmen such as myself to cut prices on G-E products in order to stay in business and retain our customers whom we have served faithfully throughout the years."

He submitted evidence to show that some large firms have notified their employees of arrangement made with a wholesale distributor of General Electric products to permit them to purchase at discount.

"Even if there is justification for G-E's retailing these appliances then why force competitors to sell at a fair traded price while they sell at a lower price?" Abraham Lowenthal, attorney for Monarch-Saphin, asked.

IT'S SERVICEABLE!



PICTURED ABOVE: UNIVERSAL COOLER
3 H.P. REMOTE CONDENSING UNIT.

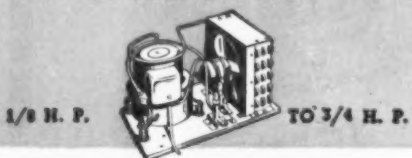
1/4 TO 15 H. P. REMOTE CONDENSING UNITS FOR COMMERCIAL APPLICATIONS

The unit illustrated is designed especially for heavy duty service in commercial refrigeration applications. Precision-built parts are carefully assembled, the unit is dehydrated, thoroughly run in and tested under actual operating conditions. Tell us about your refrigeration problems—let our sales engineers show you how Universal Cooler can solve them.

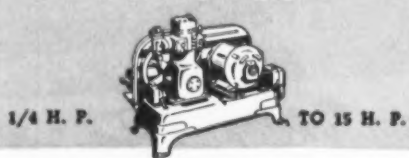
HERE'S WHY:

- 1 160 Universal Cooler genuine parts jobbers are strategically located throughout the country.
- 2 Wherever you are, you're within one day delivery of genuine Universal Cooler replacement parts.
- 3 Factory Rebuilt Replacement Compressors are available at U. C. D. jobbers for over-the-counter exchange—no delays, no long shut-down of units.
- 4 Universal Cooler units are made of quality materials and fit to close tolerances—nothing but minimum routine maintenance is needed for years.
- 5 A fully-equipped factory service department stands ready to help your parts jobbers and your servicemen with any special problem.

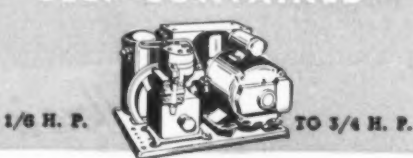
HERMETICS



REMOTES



SELF-CONTAINED



UNIVERSAL COOLER

DIVISION INTERNATIONAL DETROLA CORPORATION

MARION, OHIO • BRANTFORD, ONTARIO

The Streamlined La Crosse DRY STORAGE BOTTLE COOLER

Featuring The
Rollback Well Insulated Lids

The designed companion piece of the new La Crosse Ice Cube Maker. Adjustable wire partitions and shelf offers greater capacity—Sturdily constructed of heavy rust-resisting metal—Recessed base—High bake finish—Sizes 4-6-8 ft.



LA CROSSE COOLER CO.

2809 Losey Blvd. So., La Crosse, Wisconsin

Export Representatives: Melvin Pine & Co.
Cable address: Eximport 80 Broad St., New York 4, New York



Ray Olson Elected President of Dairy Supply Association

CHICAGO—Ray E. Olson of the Taylor Instrument Companies was elected president of the Dairy Industries Supply Association at its 29th annual meeting here which drew an attendance of some 225 top executives in the dairy industrial supply and equipment field.

At the meeting a drawing was held to determine floor locations of exhibits to be shown at the Dairy Industries Exposition which is to be held in Atlantic City in October, 1948. The exposition is expected to outstrip every preceding show in size, variety of exhibits, and attendance.

Wayne Jordan of the Liquid Carbonic Corp. was elected vice president and Ralph Young, the Sharples Corp., was re-elected treasurer.

A sharp drop in domestic milk production combined with an expanding domestic population is causing a serious crisis in the dairy field, W. A. Wentworth, vice chairman of the Dairy Industry Committee, in which DISA participates, told the DISA gathering.

During the first 60 days of 1948, milk production fell 770 million pounds compared with the same period last year, and the trend has been downward, he said, since 1945. He attributed the shrinkage to the decline in milk cows due to the fact that farmers are getting relatively higher prices for beef than for dairy products.

Adding that the current high prices for feed discourage the farmer from holding on to his cows, he predicted that with an increase in the exportation of milk products under the European Recovery Program the problem would reach its peak this fall unless corrective steps are taken.

Wentworth advocated that dairy farmers be educated to hold on to their cows because of improved grain prospects in the near future and because of the stability of milk as an income producer even during depression years. The Dairy Industry Committee, he said, is undertaking an educational program of this nature.

Store Provides Biological 'Storage Service' For Doctors

MIAMI, Fla.—As a special convenience to doctors a new 20-cu. ft. Frigidaire refrigerator, custom-built at a cost of \$760, has been installed at Fossett's Rx Pharmacy, 167 S. E. First St. here.

W. E. Fossett, head of the specialized prescription store, added the new refrigerator to 45 cu. ft. of storage space already in existence, as a "personal storage service" for physicians who use large amounts of biologicals in their practice and need to obtain new stocks without delay several times a week.

The store is located in one of Miami's largest medical office buildings, and so most of the doctors who use the refrigerator are never far away.

The special refrigerator has been built into the drug shelving in the center of the compounding department. Inside on the right, behind one of two doors, is a tier of shallow galvanized metal trays, each large enough to accommodate several dozen bottles of serums, virus, penicillin, and other biologicals.

Long-established physician-customers are given one of the drawers or a particular space, on which their names are printed.

Jordon Refrigerator Appoints 2 New Michigan Distributors

PHILADELPHIA—Two new Michigan distributors were recently appointed by the Jordon Refrigerator Co.

One, the United Refrigerator Co., will handle the Jordon line over four counties in the Detroit area. They are: Wayne, Oakland, Macomb, and Monroe. Owner Jack Chrysler has just moved into new quarters at 2201 Gratiot Ave. in Detroit.

Air Temperature Control Co., of 1575 Division Ave. So., Grand Rapids, will cover the western half of the lower peninsula and the upper peninsula.

With 'Bare Essentials'

Cost of Setting Up 500-Locker Plant Would Reach \$14,450, FFLI Estimates

CHICAGO—How much refrigeration and other equipment and materials make up the "bare essentials" needed for a 500-locker plant in an existing building?

At least \$14,450 worth, R. R. Farquhar, executive director of the Frozen Food Locker Institute, indicated in a talk at the recent meeting of FFLI here. He listed the following as the minimum equipment and materials necessary:

Ten horsepower of compressors, worth from \$1,000 to \$1,500; coils with a value of approximately \$1,000; \$5,500 to \$6,000 worth of lockers; from \$1,500 to \$5,000 worth of insulation; from \$1,500 to \$3,500 worth of lumber; \$800 to \$1,500 worth of wiring, painting, and decorating; a track scale worth \$200 and from \$300 to \$500 worth of track.

Also a \$500 power saw, \$400

grinder, \$250 counter scale, and \$250 slicer; \$50 worth of rubber stamps and from \$150 to \$250 worth of ladders, meat baskets, and basket trucks; \$200 to \$500 worth of vapor-proof paper, asphalt, and similar products; \$150 worth of blocks, saws, and knives; \$300 worth of ultra-violet lamps; and from \$400 to \$800 worth of tubing, valves, gauges, refrigerant, and other parts necessary to the operation of the system.

"If supplementary services are added, many thousands of dollars worth of materials and equipment are needed for slaughtering, smoking, curing, lard rendering, poultry processing, fruit and vegetable processing, sausage making, cabinets or display dispensers for the sale of ice cream, frozen foods, groceries, or countless other products," he said.

"Dairy bars, soda fountains, cream-

eries, hatcheries, ice-making, implement sales, commercial food processing—all and more have been added to businesses started by a locker plant being put into successful and profitable operation."

As for wrapping materials, he pointed out that it costs about a half a cent a pound on the average to wrap meat according to present prices.

"A 500-locker plant handles annually about 250,000 pounds of meat, which means that the paper cost alone is about \$1,250. Sales of cartons will boost that figure by roughly \$250. Which means that America's 10,000 locker plants are spending about \$15,000,000 every year for their wrapping materials."

Farquhar recalled that there are 10,000 plants in the country with 5,500,000 lockers. At \$40 per locker, he said, this represents an investment of \$220,000,000, most of it spent in the past 10 years.

He said these plants handle a total of 2,750,000,000 pounds of food and do a gross annual business of nearly \$200,000,000. They employ about 40,000 people who serve nearly 20,000,000 Americans.

ASRE Data Section Covers Ammonia Unit Operation

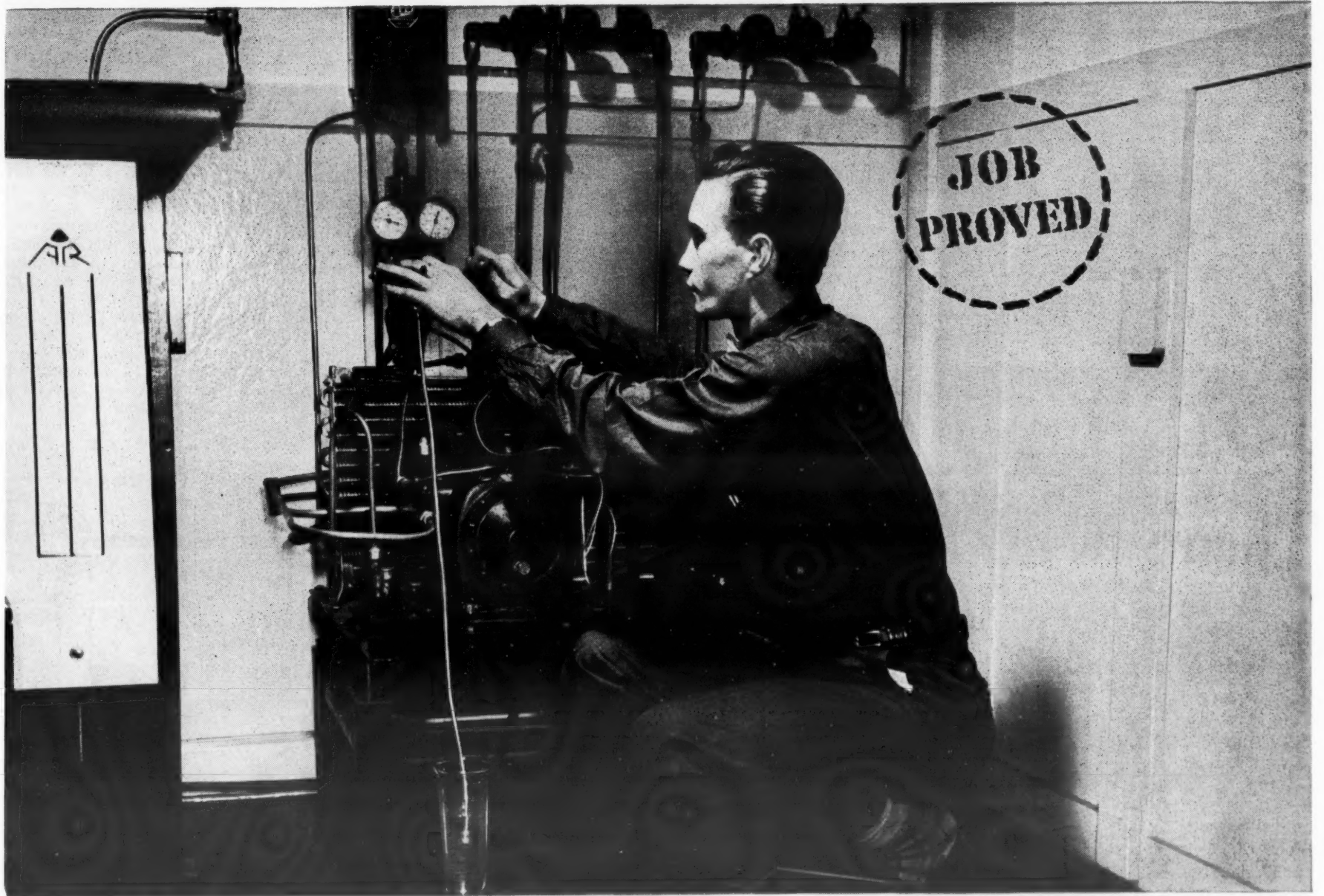
NEW YORK CITY—Detailed procedure in placing ammonia refrigeration machines into operation is the subject covered in a completely revised Application Data Section published recently by the American Society of Refrigerating Engineers.

Known as AD 19-R and entitled "Operation of Ammonia Machines," the brochure includes information on the basic principles of ammonia compressors, the mechanical refrigeration cycle, general erecting instructions, testing the system, starting and stopping a compressor, purging the system, and several hints on maintenance.

These subjects and others are discussed by several members of ASRE Technical Committee B-1, chairmanned by J. R. Chamberlain, assistant chief engineer of York Corp.

Copies may be obtained from the American Society of Refrigerating Engineers, 40 West 40th St., New York City 18. Price of individual copies is 35 cents.

Tops for Stopping Wax Troubles



SUNISO REFRIGERATION OILS...

Shown by Extensive Tests to Have Lower Wax Separation Points

Hundreds of leading servicemen give their customers the highest possible assurance of freedom from wax or wax troubles by standardizing on Suniso, the refrigerating industry's leading lubricating oils.

Comparative Flocc Tests, made by an impartial purchaser on more than 75 different refrigerating oils, show that Suniso Oils have wax separation points far below those of all similar grades.

Suniso Refrigeration Oils are highly stable and assure long, trouble-free service. They resist chemical combination with "Freon" or other modern refrigerants. No wonder that—according to recent estimates—more Suniso "Job Proved" Oils are used by equipment manufacturers than all other brands combined.

Call your local Suniso distributor for full information on Suniso's six "Job Proved" grades. For free copies of new folder and bulletin "Lubrication of Refrigeration and Air-Conditioning Equipment," write Dept. RN-4...

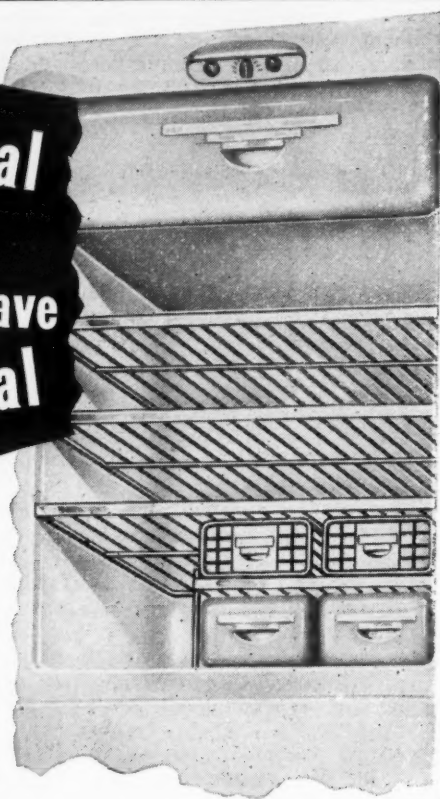
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Bolting UE (CIO) Local Switches to Auto Union In Dispute Over Policy

HARTFORD, Conn.—Local 251 of the United Electrical, Radio, and Machine Workers (CIO) 1,600 strong, withdrew recently from its parent organization (UE) and joined the United Auto Workers union.

The withdrawal has been interpreted as the result of disagreement between the local group and the stand of the international organization.

Officials of UE have refused to sign non-communist affidavits, have opposed the Marshall Plan, and have supported Henry A. Wallace for president.

Other electrical locals in this area were expected to take similar action in the near future.

In seceding from the UE, Local 251 transferred its contract with the Niles-Bement-Pond Co. to the UAW, claiming that the contract was its property and not that of the UE. UAW and company officials agreed with this stand.

A UE official, in denouncing the secession, declared that local members had been "given the Goebbels treatment" and that the secession "was pushed through in an atmosphere of confusion and hysteria."

He predicted that the local would soon be back with the UE and said that the international organization would use all legal resources that are available to protect its contract rights.

Daily Rental Offer on Laundry Equipment Sells 25 Machines In Three-Week Period

KANSAS CITY, Mo.—Offering Thor conventional washers and Glad-irons to housewives on a daily rental basis has proved to be a good deal for John A. Passler of the Passler Appliance Co. here.

In three weeks after launching the rental idea, he had placed 75 washers and 25 ironers in the homes of prospects. Twenty-five of the machines stayed there.

Passler was encouraged in the promotion by the Thor Corp. which paid 50% of the advertising bill, it was reported. Under his "washer and ironer service," Passler charges \$2 per day for the washer and \$1.50 per day for the ironer.

He promises delivery in the morning and picks up the unit in the evening. According to his advertis-

ing, he allows several families to do their washing in the same machine in one day at no extra cost.

Either Passler or his wife generally goes along with each rental delivery to instruct the housewife in the proper use of the machine and to get in bits of sales information.

Passler finds that once a washer or ironer is in the home, the customer is much more receptive to his sales talk. Passler points out to her that using the washer once a week costs \$8 per month. Purchasing the same washer on the instalment plan will cost her only \$9 per month.

If the \$25 down payment seems to be blocking a sale, Passler applies a few weeks rental toward it.

The best thing about this idea, according to Passler, is that it works.

Frank's Mgr.-Buyer Post Goes to Keith D. Nelson

FORT WAYNE, Ind.—Keith D. Nelson has been appointed manager and buyer of the appliance department of the Franks Dry Goods Co. here, company officials have announced. He fills the vacancy caused by the recent death of Earl Wunder.

Nelson was department head and buyer for Montgomery Ward & Co. since 1936, prior to joining the appliance department of Frank's as a salesman after his discharge from Army service as a communications chief.

Westinghouse Market Tests New Electric Clothes Drier

MANSFIELD, Ohio—Market tests on the new Westinghouse electric clothes drier were started last week in Indiana and Detroit. P. J. Sargent, merchandise manager for Westinghouse laundry equipment, reports.

Distribution and sale of the drier will be restricted to these two territories until the tests are finished. The drier retails for \$219.95.

Dept. Store Volume Gains 4% For Week Ended March 13

WASHINGTON, D. C.—For the week ending March 13, department store sales rose 4% over the corresponding week last year, the Federal Reserve Board has revealed. This increase reflects, at least in part, the fact that Easter comes a week earlier this year, the Board said.

Only stores in the Boston and Richmond Federal Reserve districts showed sales declines. The Philadelphia and Atlanta districts scored the largest increases.

For the four weeks ending March 13, national sales were up 7%. For the year ending on the same date, they were up 6%.

Percentage gains or losses by districts are: Boston -3, New York 1, Philadelphia 23, Cleveland 5, Richmond -4, Atlanta 14, Chicago 4, St. Louis 7, Kansas City 4, Dallas 8, San Francisco 2.

'47 Dept. Store Profits 21% Lower Than In '46

NEW YORK CITY—Department store profits in 1947 were 21% lower than in 1946, a survey of 182 stores made by the National Retail Dry Goods Association has revealed.

Though the total dollar volume of the reporting stores was \$2.2 billions in 1947 as compared with \$2.1 billions in 1946, the physical volume of merchandise sold dropped 5%.

Stores with annual sales of over \$1,000,000 made an average net profit of 4.1% on sales last year as compared with 5.2% in 1946, it disclosed. Markdowns on merchandise rose from 6.2% of sales in 1946 to 7.2% in 1947. Specialty stores' markdowns increased from 7.6% to 9.1%, while unit volume dropped 11%.

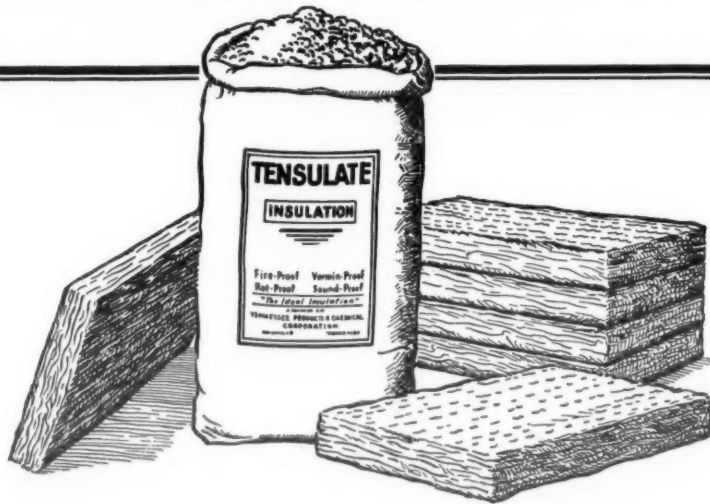
There's no "hand-power" in modern heating
... thanks to the Appliance Industry



Americans have many reasons to be grateful to the appliance industry. For much of the ease, the convenience and the healthfulness of modern American life is due to modern American appliances. Delco Products is proud of its part in this great industry. Many of the first models of famous appliances were powered by especially developed Delco Motors. And as these products have been consistently improved, so Delco Motors have been made ever more efficient and dependable. Built in sizes from 1/8 to 50 h.p., Delco Motors are quiet, compact and designed to fit the requirements of the particular application. Delco Products Division, General Motors Corporation, Dayton, Ohio.



Delco Motors
power America's Leading Appliances



Where a quality product demands
the finest of

INSULATION

- - - that product needs

TENSULATE

Tensulate is a mineral wool with millions of dead-air cells that insulate with maximum efficiency, made by

Tennessee Products & Chemical Corp.

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In West Coast Firm



John Marshall



Van D. Clothier

John Marshall Joins
Van Clothier Co.

LOS ANGELES—Van D. Clothier, manufacturers' representative in the refrigeration field here for the past 25 years, is incorporating April 1 and is bringing into his company John A. Marshall, formerly assistant general sales manager of the Wolverine Tube Division of Calumet & Hecla Consolidated Copper Co.

The organization will cover the entire far west area, according to Clothier, who will be president of the company with headquarters in Los Angeles comprising main office and warehouse at 1015 E. 16th. Marshall will be vice president and will open a San Francisco office around May 1, from which he will direct activities in northern California, Oregon, and Washington. Marshall had been with Wolverine Tube for 11 years.

Thomas P. O'Connor, who has been with Clothier and who will be secretary of the company, will supervise activities in the southern California and Arizona territory.

Lines handled by the Van D. Clothier Co. include Wolverine Tube, Bush Mfg. Co., Mayson Mfg. Co., Swift Mfg. Co., American Injector Co., Kerotest Mfg. Co., McIntire Connector Co., Virginia Smelting Co., Buckeye Forgings, and Cleveland City Forge.

Jamestown Will Have
New Produce Warehouse

JAMESTOWN, N. Y.—Crawford N. Bargar, general manager of the S. M. Flickinger Co. here, announced that the contract for a new fresh fruit and vegetable warehouse, which will use considerable refrigeration, has been awarded to Scalise Bros. Cost is estimated at \$75,000.

The new building not only will have complete facilities, including coolers for the handling of all fresh fruits and vegetables, as well as bananas, but also will have large freezers for frozen foods.

THOMAS TRUCK
of Keokuk

Thomas "Job-Suited" round corner truck. Ten sizes. Made with over 1000 different handles, boxes, shelves, etc. . . . one of them "Job-Suited" to your business. Thomas also makes many other types of 2 and 4-wheel trucks, casters and wheels. Write for catalog M.O.

THOMAS TRUCK & CASTER CO.
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WILSON
REFRIGERATION, INC.

- FARM AND HOME FREEZERS
- REACH-IN REFRIGERATORS
- WALK-IN REFRIGERATORS
- FARM MILK COOLERS

DIVISION OF WILSON CABINET CO., INC.
SMYRNA, DELAWARE

Another Aid To Medical Science:

Refrigerated Bone Banks New Help
To Surgeons In Orthopedic Cases

NEW YORK CITY—The development of refrigerated bone banks, in which human bones are stored at -10° to -20° F. for use in surgical operations, has been announced by Dr. Philip D. Wilson, surgeon in chief of the Hospital for Special Surgery here, and Dr. Leonard F. Bush of New York Orthopedic Hospital.

Over the past year and a half, these two doctors have conducted more than 125 successful operations and transplantations using bones kept in a refrigerated bank for up to three months, they report.

Though human bones can be kept by chemical means, sharp freezing them has proved to be easier and simpler and allows storage of larger quantities in a wider variety of sizes and shapes, they indicated.

Bones for a bank are obtained from operations and amputations and

are stored in sealed, sterile jars. Only healthy bone segments can be used the doctors noted. Every effort is made to avoid specimens from persons who have had syphilis, malaria, or recent attacks of jaundice. These bones might still contain organisms which caused the disease, they explained.

Held fresh and ready for use by the low temperature refrigeration, the bones are employed to fill cavities caused by accidents or tumors, to fuse or join joints in the wrist or spine, to bridge small gaps in fractures or injuries, and to remodel jaws and noses.

In the case of cavities, mashed soft bone is used for the filler. In other cases, hard slivers of bone are used.

Though only smaller lengths of bone have been employed for grafting to date, Dr. Wilson thinks that

pieces of more than 8 or 10 in. can be used successfully. In such instances, the transplanted portion could be fastened to the living bone by small metal screws, he said.

The transplanted segment, he explained, acts as a scaffold, as a source of minerals, and as a stimulant to the growth of new bone until it is completely absorbed by the living bone.

Because transplantations can be made without regard to blood groups or types, use of a bone bank saves the patient the necessity of undergoing the pain and shock of a supplemental operation in order to get bone from his own body to replace that which he has lost, the doctors pointed out. It further avoids weakening the area from which the bone would be taken.

J. N. Blair & Co. Organizes

SACRAMENTO, Calif.—J. N. Blair & Co. has been incorporated in Sacramento County, Calif., with a capital of \$250,000, to conduct business as refrigeration and air conditioning engineers. Principals are: Minnie J. Roth, N. R. Blair, and B. B. Baker, all of Sacramento.

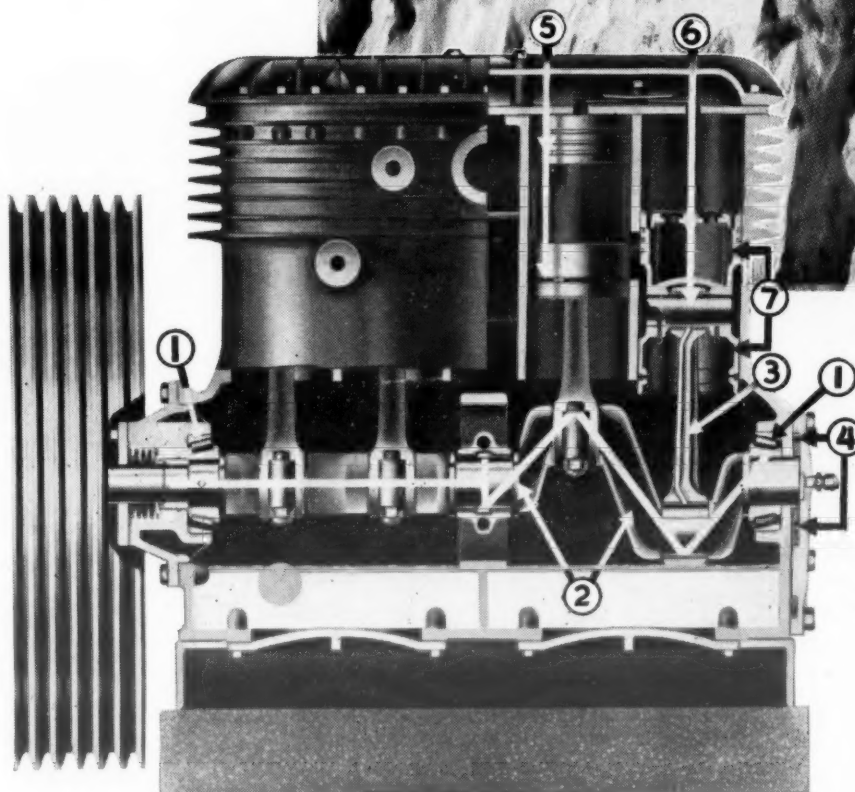
Beverage Vendors Are
'Hottest' Item Now
In Coin Machines

NEW YORK CITY—A big market potential for vending machines that dispense hot coffee or four or more different soft drinks for consumption in paper cups was foreseen recently by Fred Brandstrader, legislative counsel for the National Automatic Merchandising Association.

He noted that the greatest activity currently prevails in beverage vendor lines.

Brandstrader, addressing a regional meeting of the association here, scored the use of fractional coins in vending machines as impractical. He pointed out that slug-rejecting mechanisms on the vendors could not be adjusted accurately enough to handle coins of sizes different from those now in general circulation.

A 7½ cent piece, for instance, could not be made sufficiently different from a nickel or a quarter, if it had the proper metal value, for the machines to distinguish it.

The Inside Story of
BAKER COMPRESSOR
SUPERIORITY

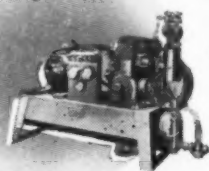
Photograph by Bradford Washburn

- 1 TIMKEN TAPERED ROLLER BEARINGS—Eliminate friction and lateral play . . . assure perfect alignment.
- 2 THREE-BEARING CRANKSHAFT—Drop-forged, extra heavy . . . rifle-drilled for full pressure lubrication . . . large bearing surfaces.
- 3 I-BEAM SECTION CONNECTING RODS—Drop-forged . . . crank bearing of Nickelite for long wear.
- 4 GEAR-TYPE OIL PUMP—Provides positive, high-pressure lubrication throughout the compressor.
- 5 SPECIAL FORMULA PISTON RINGS—Precision-machined to correct tension in honed cylinders.
- 6 FULL LENGTH PISTON PINS—Hollow construction . . . hardened steel . . . accurately ground to fit honed bushings.
- 7 DOUBLE TRUNK PISTONS—Precision ground and with piston pins centrally located to distribute side thrust evenly.

For over 40 years Baker has built its reputation on quality and sound engineering. Today it offers a full line of Freon and Ammonia equipment—compressors, condensers, coils, valves, fittings, etc.—all engineered to highest standards. No matter what your requirements in air conditioning or refrigeration, it will pay to consult Baker. Write today for address of nearest office: Baker Ice Machine Co., Inc., South Windham, Maine.

Zone balanced • Engineered

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FACTORIES AT OMAHA, NEBRASKA AND SOUTH WINDHAM, MAINE • • • HEADQUARTERS, SOUTH WINDHAM, MAINE

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PRODUCTS COMPANY



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REFRIGERATOR SHELVES • STAMPINGS
FORMED AND WELDED PRODUCTS

We would consider it a privilege to cooperate with you on any problem related to the engineering or design of Refrigerator Shelves.

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on your next job choose a

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Production Rise Spurs G-E Motor Shipments

SCHENECTADY, N. Y.—Because current production of G-E single-phase, integral horsepower motors—7 to 7½ hp.—has been increased five times that of pre-war level, these motors are now largely available for immediate delivery in the ratings principally demanded, reports W. H. Henry, manager of General Electric's Small and Medium Motor Divisions. Where a particular rating is not in stock, shipment can be made in a few weeks.

Henry also announced that three-phase open motors up to 75 hp. are being shipped either from stock or on a normal pre-war shipment cycle, and that enclosed, non-ventilated motors are also in an "almost stock" position. Production of totally-enclosed, fan-cooled motors, Henry said, is expanding rapidly to the point where these motors will soon be on stock or normal shipment basis.

Affiliated Washington Store Will Handle Sid Harvey Line

WASHINGTON, D. C.—Sid Harvey of Md., Inc., parts and supply wholesaler, has been opened here by Sid Harvey. The new firm is associated with Sid Harvey, Inc. of Valley Stream, N. Y. and will act as distributor for the Sid Harvey line of repair and installation parts and supplies for oil burners. Other parts will be purchased independently.

Sid Harvey, who heads the Valley Stream firm, has controlling interest and is chairman of the board.

Warren 'Woggle-Scrub' Cooler Does Job By Agitating Warm Milk In Center of Can

ATLANTA—Agitation of both the cooler water and the milk in the "Woggle-Scrub" milk cooler will cool cans of milk from 95° to 45° F. in 30 minutes or less, claims the Warren Cooler Corp., recently formed to manufacture and market the new product.

The milk cooler consists of an insulated cabinet with refrigerating coils on all four sides, fitted with a metal cradle called the Woggler mounted on four ball-bearing supports and driven by an electric motor. The cooler accommodates six 10-gallon cans or nine 5-gal. cans of milk.

In using the cooler, the cabinet is first filled with water to 2 in. above the coils. When the coils are covered with ice approximately 2 in. thick, the compressor stops, and the cans may then be placed inside the Woggler.

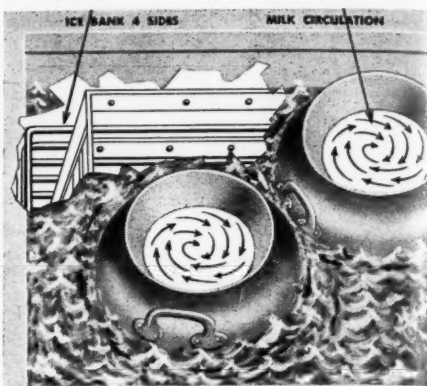
Motor of the Woggler impels in it a circular pattern so that the water scrubs against the exterior of the cans while the milk travels in a circular fashion. This, it is claimed, breaks up the warm core of milk in the center of the cans and causes faster heat transfer.

By the time the milk has been cooled to the desired temperature, the compressor has started again to reform the ice bank on the coils. The cabinet is insulated with 3 in. of sheet corkboard hot-sealed by a vulcanizing process.

Initial cost of the cooler is claimed to be lower than other methods, and cost of operation and upkeep is also said to be under that of former devices.

Another advantage, according to the manufacturer, is that the new method permits the milk to be poured directly from the container into which it is milked into the container in which it is to be cooled, keeping the fluid free from the usual barn dust and holding bacteria growth to a minimum.

Inventor of the cooler is Cornelius P. Lee, veteran refrigeration engineer who is vice president of the new company and is supervising its



'Woggle-Scrub' milk cooler

manufacture.

Other officials of the firm have long been connected with the Warren Co., Inc., here. President of Warren Cooler is Virgil P. Warren, chairman of the board of the directors of Warren Co.

Among the directors are other officers of the Warren Co.—John D. Harris, vice president; Thomas G. Smith, executive assistant to the president; Roger D. Jacobs, secretary; and Theron E. Scarbrough, treasurer.

Hossinger To Distribute For McCray In Indiana

FORT WAYNE, Ind.—Organization of the Hossinger Refrigeration Co. at 1611 South Calhoun St. here, was announced March 25 by Harold L. Hossinger. The new firm opened with a full showing of the McCray Refrigerator Co. line.

Hossinger's territory takes in all of northern Indiana as McCray distributor. His associates are John C. Hossinger, sales and service, and James Smith, serviceman.

Hossinger has previously handled the McCray distributorship in Kendallville and in various other territories in the east and south portions of the U. S.

DESIGNED FOR DURABILITY

NATIONAL LOCK REFRIGERATOR HARDWARE

"THRU-THE-DOOR" LOCKING

• Commercial Refrigerator modernization is easy with "Thru-the-Door" Hardware. Ask us for application drawings. Standard items available for either plug type or full type door.

"EDGE-MOUNTED" HINGES

• The "Edge-Mounted" hinge is another answer to your modernization problem. Many years of field usage have proven its durability. Write for application drawings proving easy adaptation.

WRITE NOW FOR DESIGN PARTICULARS

REFRIGERATOR
HARDWARE
DIVISION

NATIONAL LOCK COMPANY

ROCKFORD • ILLINOIS

The New FOGEL "Self-Service" Refrigerated Open Display Case



Designed for absolute customer convenience and satisfaction.

Yes Indeed!

Food stores of all sizes are prime prospects for this New Open Case . . . a profitable market that has hardly been touched.

The FOGEL 5800 attracts sales like a magnet, for you . . . and for your customers. It can be used to sell:

1. Meats
2. Beverages
3. Vegetables
4. Delicatessen
5. Dairy Foods
6. Frozen Foods

(equipped with freezer partition plates).

This is another example of greater profit opportunity offered dealers representing FOGEL . . . one of the most complete lines in the industry. Write TODAY for information about dealer opportunities.

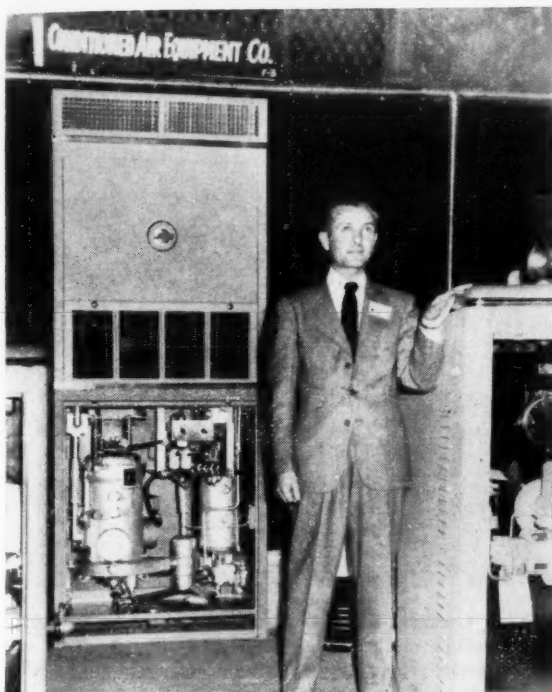


FOGEL REFRIGERATOR COMPANY

5400 EADOM STREET • PHILADELPHIA 37, PA.

Quality manufacturers, for almost one-half century, of Display Cases, Reach-Ins, Walk-Ins, and Freezers.

There's Something Behind That Far-Away Look



The photographer caught Frank Strickon, salesman, with a far-away look in his eye. But there is a Chrysler Airtemp packaged air conditioner, distributed by Conditioned Air Equipment Co. of Minneapolis, in the background.

Junk man Disappears, But So Does Air Cooling Equipment

SALISBURY, Md.—Our economy is so complex these days that even junkmen need to know something about air conditioning.

It seems that the day after John Davis, a trash collector, cleared away debris from an alley behind a theater, the manager discovered that a "600-lb. metal cylinder" (possibly an evaporative condenser) was missing from his cooling system. He notified police who questioned Davis.

The trash collector recalled that he had experienced great difficulty in removing one large piece of "debris" from the rear of the theater. So much so that five men were needed to give him a hand loading it on his truck.

When asked what had become of the equipment, Davis directed police to a nearby junkyard from whence the air conditioning part was recovered. The trash collector had sold it to the junkyard for \$6.60.

Plastic Sheets Help Keep Produce Displays Fresh, Self-Serve Market Finds

LEMAY, Mo.—The use of lightweight plastic sheets to cover all open produce displays over night has proved a simple means of eliminating wilted appearance and potential spoilage losses for the Lemay Market here.

Featuring self-service extensively in its produce department, the management normally left each rack of fruit and produce neatly stacked at closing time, and ready for immediate selling when the store opened in the morning.

Frequently, however, due to high outside temperatures or slow sales on some of the items, the air would dry out and otherwise wilt green vegetables. The lightweight plastic sheets, of the same type as are frequently used for luncheon-table covers, effectively sealed out the drying outside air, thus keeping the fruit and produce from wilting, the owners found.

Dattle Manages Tenney's East Central Region

NEWARK, N. J.—Alvin Dattle, formerly procurement manager and regional representative for Electric Power Equipment Corp. in the east central states, has been appointed regional manager in the same area by Tenney Engineering, Inc.

Dattle will work with jobbers and manufacturers in western Pennsylvania, Ohio, Michigan, Indiana, Kentucky, and Tennessee on engineered applications of Tenney equipment.

Denver's Thermo Supply, Inc. Moves to Tenth St. Location

DENVER—Thermo Supply, Inc., wholesaler of refrigeration and air conditioning parts, equipment, and supplies has moved to 30 W. Tenth St. here, Wallace A. Henry, vice president and general manager, has announced. Phone number at the wholesale company's new location is Main 5278.

Winter-Long Fuel Shortages Have Had Little Effect On Demand for Heating, Air Conditioning Units

MINNEAPOLIS — The restriction on natural gas and the winter-long fuel oil shortage here had little effect on the demand for heating and air conditioning units.

This was the consensus of manufacturers, distributors, and dealers displaying equipment at the 1948 Minneapolis Builders show which ended here March 21. Although the show covered a wide variety of home improvement products, heating, air conditioning and refrigeration exhibits dominated the exhibition, with more than half of the 200 booth exhibits being devoted to heating and air conditioning alone.

Displays covered radiant heating, gas and oil fired units, self-contained packaged air conditioners, and thermo control devices.

According to John Wiik, co-owner of the Twin City Plumbing & Heating Co., home owners in this area are willing to pay from \$200 to \$900 above the cost of installing a coal-fired furnace for forced-air equipment or a combination heating and cooling air conditioner.

He reported that installation of gas-fired winter air conditioners in homes during the past six months was 20% higher than a similar period a year ago.

"Newly married couples and new home builders are the greatest buyers of gas or oil fired air conditioners," he added.

Sales in the commercial and industrial field are also up, he said, pointing to a Servel Gas Air Conditioner which was recently sold to one of Minneapolis' leading candy houses.

H. O. Soderlin Heating Co., pioneering the installation of radiant panel heating systems in this area, displayed a cut-away model of a room

which proved to be a "crowd-stopper."

F. K. Michaelson, company salesman, announced that he had been "swamped for information."

"The most difficult job we have here or in the field is getting people to understand the difference between radiant heat and steam heat," he added.

The firm has installed radiant heat in more than 100 homes during the past year and a half. During the period company engineers have learned several tricks to cut down heat loss.

To increase heating efficiency, copper tubing is no longer laid directly on a gravel base. Instead, 2 or 3 in. of vermiculite and cement are placed between the tubing and gravel to provide insulation. Asbestos and insulation board are also placed between the footings and floor paneling.

Several new thermo control units were also displayed for the first time here. The Conditioned Air Equipment Co., distributors of Chrysler Airtemp, featured the new Dole Thermo-matic register, manufactured by Dole Valve Co., Chicago, and displayed for the first time at the New York International Heating & Ventilating Exposition.

The register has a Healix heating element built into the knob regulating the register vent. The knob can be set at any desired temperature.

Minneapolis-Honeywell Regulator Co. for the second time within less than a month exhibited its automatic electronic single zone control which has been selling for home use in limited quantities since Nov. 1. This control has been undergoing experimental home tests here for the past two years.



3-5-7-ton

All-purpose air conditioning unit, ruggedly built to give trouble-free performance, oversized to deliver 12,000 BTU's of actual air conditioning for every ton of rating.



1 1/2-2-3-ton SELF-CONTAINED UNIT

One of the most compact 3-ton air conditioning units made. Precision built with oversized all-copper condenser coil and TYPHOON's exclusive condensate removal system.

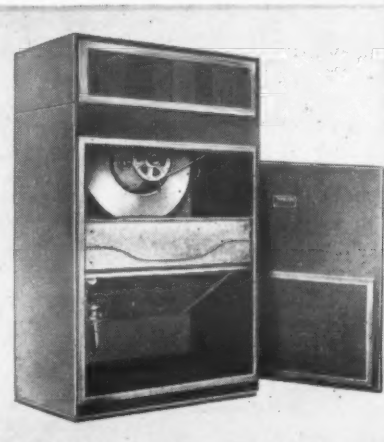
AIR CONDITIONING

Designed FOR MAXIMUM Flexibility

TYPHOON equipment is designed to perform satisfactorily in a wide variety of installations — under all kinds of conditions. The self-contained air conditioning units and all TYPHOON equipment are engineered for maximum flexibility — economy of operation — dependable, trouble-free performance — long life — full-rated capacity after years of hard usage.

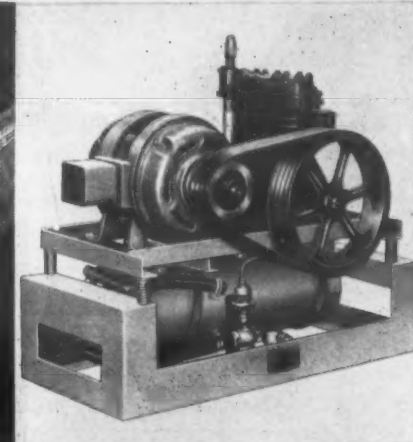
TYPHOON units can be used singly or in series to air condition small and large premises, providing zone control cooling. The addition of heating coils and humidifiers is all that is necessary to make TYPHOON units year round conditioners. TYPHOON low sides are adaptable for use as a central plant or a unit system with TYPHOON high sides or other type of condensing unit.

MORE THAN 35 YEARS OF AIR CONDITIONING EXPERIENCE ARE EMBODIED IN TYPHOON PRODUCTS



Available with three coil sizes and three fan motor sizes for units of three, five and seven ton capacity. Complete with filters and multi-outlet expansion valve. Removable front panel and two-way directional grill, insulated, 35" wide x 19 1/2" deep x 57" high.

Fabricated to specifications in any size or shape for immediate delivery. HEATING COILS • WATER COILS • DIRECT EXPANSION COILS • NON-FREEZE COILS • STANDARD TYPE COILS.



3 to 15 Ton Sizes

TYPHOON's suspension spring base absorbs ALL VIBRATION, eliminates need for cork pads, rubber blocks. Complete with compressor, flywheel, V-belt, drive, line valves, all copper condenser, receiver ball-bearing motor, dual pressure control, water regulator valve and belt guard.

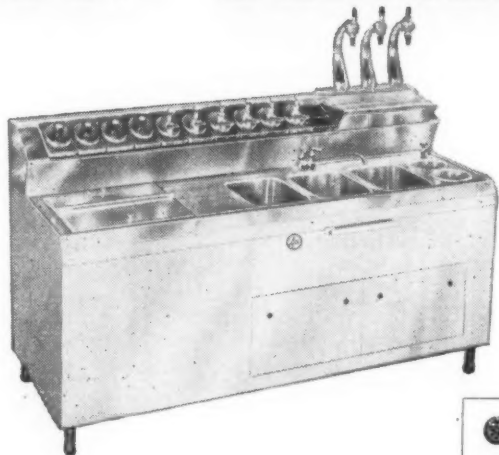


NATIONALLY ADVERTISED

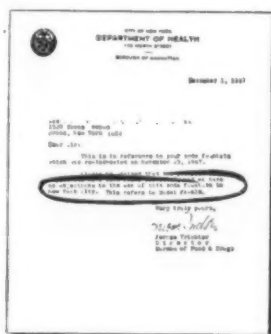
For Information write Dept. 12A

Division of Ice Air Conditioning Co., Inc.
794 UNION STREET • BROOKLYN 15, N. Y.

100% Sanitary



ACE takes pride in introducing the first completely sanitary fountain . . . passed by the New York City Department of Health.

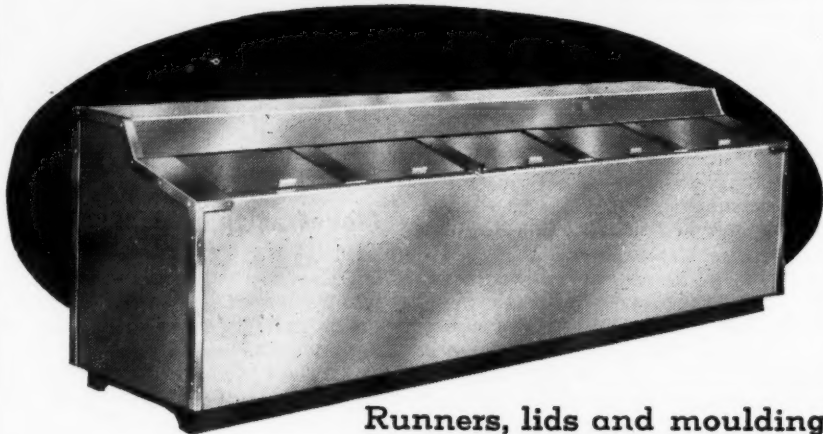


ACE CABINET CORP.
NEW BEDFORD, MASS.

Manufacturers of: Ice Cream Dispensing Cabinets, Upright Ice Cream Storage Cabinets, Home and Farm Freezers, Frozen Food Display Cabinets, Creamer Soda Fountains, Bobtails and Sandwich Units.

ROGERS Dry Beverage Cooler

With disappearing lids
Allowing every section to be used simultaneously.



Runners, lids and moulding of stainless steel
39" high; 30" wide; 4, 6, 8, or 10' long.

Write for catalogue showing this quality line of refrigeration.

DEALERS WANTED
Write, wire or phone today for information on franchise.

W. ALLEN ROGERS Industries
BOX 272-AC DEMOPOLIS, ALA.
Immediate Delivery!

G-E Seeks Injunctions Against Price Cutters

NEW YORK CITY—The General Electric Co. was seeking injunctions here last week against eight local retailers to restrain them from selling its fair traded small home appliances at less than the established prices.

An injunction against one dealer, Drake Home Appliances, Inc., was granted by the state supreme court with hearings scheduled on the others for late last week and early this week.

In its petition to the court, G-E asked damages against the defendants. However, the order against Drake specified that "neither party shall recover from the other party any costs or damages herein."

Other retailers cited in the manufacturer's petition were Brisk-Forman Sales Co., Bondy Distributors, Inc., Aramac Central Sales Co., Inc., T. A. Gary, Heins & Bolet, Monarch Saphin Co., Inc., and Paul Silken Inc.

G-E claimed that it had warned all these dealers about such price cutting, which, it said, ranged from \$3.85 to \$9.90 below minimum prices, before it instituted this action.

Concurrently, the Queens Electrical Appliance Merchants Association announced that it had set aside \$2,000 to battle alleged price-cutting appliance firms in the courts. Gerard I. Nierenberg, legal counsel for the association, stated that he will seek orders to show why one or more New York discount houses should not be enjoined from selling appliances and radios below established fair trade prices.

Hotpoint Service Managers In School



Hotpoint, Inc., recently held a training school for its distributors' product service managers. The two-week course was designed to prepare the managers to expand their own field organizations. Present at the session pictured above were (from left to right): B. K. Williamson, General Electric Supply Corp., Denver; C. Bruns, Havens Electric Co., Albany, N. Y.; R. A. Treat, Hotpoint refrigeration product specialist; L. A. Haager, GESCO, Pittsburgh; C. Dean, Hotpoint trainee; C. C. Neil, GESCO, New York, and J. Ramirez, Puerto Rico Home Appliance Co., San Juan, Puerto Rico.

New Bendix Clothes Drier High School Pupils See For Use with L-P Shipped Home Laundry In Action

SOUTH BEND, Ind.—Initial shipments of Bendix automatic clothes driers with controls and burners for L-P (liquefied petroleum) gas were made recently for distribution in the rural areas of 12 states—Illinois, Iowa, Kansas, Missouri, New York, California, Washington, Oregon, Oklahoma, Tennessee, Texas, Florida.

"Some distributors believe one-third of their dryer business will be the L-P model, which sells at the same price as our other gas models," said L. F. Worth, manager of the company's dryer division.

Robert L. Sampson Elected V.P. Of Norge Distributorship

CHICAGO — Robert L. Sampson has been elected executive vice president of The Sampson Co. here, distributor of Norge appliances and other household products, according to Peter Sampson, president.

MADISON, Ill.—Three-way cooperation of a distributor, a dealer, and a teacher exposed 119 home economics pupils of the Madison, Ill., high school to the wonders of automatic home laundering recently in five 50-minute presentations in the home of Sidney Salada, salesman for Friedman Furniture & Hardware.

Working together on the sales promotion were Salada; Miss Ruth Walton, home economics instructor, and Mrs. Charlotte Will, home service director for the Artophone Corp., St. Louis distributor for Bendix Home Appliances, Inc. Mrs. Will demonstrated the Bendix automatic washer, dryer, and ironer to five groups in the home of Mr. and Mrs. Salada in Granite City.

"The results were very satisfying," reports Mrs. Will. "Many students had never seen 'such wonderful things.' They could 'hardly believe it.' The senior girls, some engaged, were most enthusiastic. Interested also was the boys homemaking class."



How you, Mr. Dealer, can Turn COLD WATER into COLD CASH

Selling and Servicing Famous PURO WATER COOLERS

Nationwide demand for PURO'S modern line of coolers is growing so fast that our own direct sales organization no longer can handle it alone.

Here's a rare opportunity.

Now for the first time in 50 years, PURO, America's Drinking Water Specialist, invites applications from dealers who want to profit through PURO sales and service opportunities.

WHY PURO IS A QUALITY WATER COOLER

PURO Water Coolers excel in design, in appearance, in more rugged construction, in more and better insulation . . . in greater cooling capacity. Because we've always done a rental-service business, we BUILD a

better cooler for long years of trouble-free operation.

SELL OR RENT

If you qualify, you can make attractive profits on outright sale of units. Or, if you want profits to continue for years, you can install and service on a contract basis on the tested PURO PLAN.

Shortages are over. We can supply all models in volume — promptly.

Where dealer business warrants, we will back you with advertising and sales aids . . . supply you with tested selling technique.

Here's a big opportunity to turn cold water into cold cash. Act now. Write us today, describing your business and giving references.



PURO FILTER CORPORATION OF AMERICA
436-440 Lafayette Street, New York 3, N. Y.
Cable address — "Centadrink, New York"



Mouldings to Blend with YOUR Product's Design

● Moulding is an integral part of effective design. Be sure mouldings for your products are right with mouldings by JOHN LEES. Stainless steel moulding may be the answer to a problem which might have required more expensive, and less attractive, castings or stampings. Consult our engineers, experienced in meeting moulding requirements for decorative trim, frame assemblies, functional channels, and other applications. Let mouldings by JOHN LEES help make sales for you.

● Send for free analysis, recommendations and costs on your rolling, forming and polishing requirements. Hundreds of standard sections. Special sections made to specifications.



NEW! Electrolytic Polishing!

● JOHN LEES is equipped to polish either mechanically or by the new electrolytic method. The latter is superior for punched, stamped, and formed surfaces; produces a gleaming finish over the entire surface. In many cases it is less costly.

DIVISION OF
The SERRICK Corp., Muncie, Indiana, U. S. A.

Appliances Checked 6 Ways on Store's Test Panel Before Delivery

HOLLYWOOD, Calif.—No customer who purchases a new refrigerator or electric range at Electra City, huge major appliance dealership here, need ever be disappointed because it won't function properly in his own home, thanks to a novel major appliance "test panel" developed by Carl Stuewe, owner.

"Once in a while, even though a refrigerator appears in perfect running order when it is sold to the customer, one of the controls will be out of adjustment, or some minor repair needed," Stuewe pointed out.

"Any of these things will bulk large in the customer's impression of the company later on. Therefore, we have set up a plan whereby every major appliance gets a thorough check before it is delivered to the customer."

The "test panel" consists of a plywood frame, with its surface containing a dozen outlets and switches. A light bulb burns above each of the units, indicating the amount of power output. Every major appliance is subjected to test under varying household current, with every electrical part checked for operation.

"We actually give every appliance six checks before it is released for delivery to the customer," Stuewe said. "And in fact, the ability to take the customer back and show her how our test panel operates has helped us to make many sales which were otherwise on-the-fence."

Another principle which Stuewe observes is to "eliminate delay in getting the appliance to the customer." Whereas, many firms postpone delivery for three or four days, Electra City delivers on the same day the appliance is purchased, if it is at all possible.

"During the time between the sale and the delivery, many things can go wrong," Stuewe pointed out. "The appliance may be damaged in being moved from the sales floor for delivery, we may have an electrical failure throw the controls out of whack, etc. Therefore, the quicker we can hustle it to the customer, the better."

To make these "speed limit deliveries" Electra City has a fleet of seven all-white appliance delivery trucks, which are in keeping with the white uniforms worn by all service personnel and drivers. The trucks are kept glistening with a weekly washing, are simonized down at regular intervals, and must be always as clean as the appliances themselves.

New Lauderall Distributors To Cover West Coast Cities

DETROIT—Signing of new distributors for the Lauderall automatic home laundry in the Spokane, Wash. and Portland, Ore. territories is announced by the F. L. Jacobs Co.

F. B. Connelly Co. of Spokane will handle Lauderall distribution in that area.

Electrical Distributing, Inc., Portland, will take over the Portland territory formerly served by Huletz Electric Co., Inc. which will continue to serve the Seattle area.

All-Brand Electric Range Show by Indiana Utility Nets Dealer Prospects

FORT WAYNE, Ind.—A radio commercial featuring the Electric Range Show-on "The Kilowatt Hour" of the Indiana Service Corp. brought crowds of "viewers" and interested prospects into the corporation's show rooms maintained for the convenience of local appliance dealers.

Here's what the radio commercial said:

"Say, mother, if you're one of the many thousands of Fort Wayne homemakers who are cooking on out-of-date ranges, you've probably given a lot of thought lately to buying—or at least looking at—a new electric range.

"Well, we have an item that will interest you today. We'd like to invite you to attend a show before you buy that new range. The show we're talking about will be held at Indiana Service Corp.'s Leisure Electric Home.

"It's an Electric Range Show, and you'll have an opportunity here to see ALL the many different kinds of electric ranges sold in Ft. Wayne, assembled in one place, for you to examine as long and often as you like. If you find a model you want, we'll be glad to give you the dealer's name where it can be purchased.

"You'll be able to see for yourself the many advantages of electric cooking—the speed, economy, automatic features, deepwell cookers, exact cooking temperatures, and sheer beauty of the new electric ranges. There'll be ranges available for EVERY pocketbook. You'll be able to identify these new electric ranges by the distinctive Reddy Kilowatt tag which each one will carry. You can see this tag not only at the Electric Range Show but on the display floor at your favorite appliance dealer's store.

"Look for this tag when you shop for a new range. It's your guarantee of real cooking pleasure. And don't forget to add to your shopping list a 'Must See' for the Electric Range Show, opening March 16 and continuing for two weeks at the Leisure Electric Home, 122 East Wayne Street."

Dealer Suit Claims Taft-Hartley Violation

BROOKLYN—Demonstrations and distribution of circulars by two CIO unions and their presidents in violation of the Taft-Hartley Act caused loss of business to Vim Electric Co., Inc., the firm charged in a \$500,000 damage suit filed in U. S. District Court here.

Named as defendants were Retail and Wholesale Employees' Union, Local 830, and its president, Nathan Solomon, and United Retail, Wholesale and Department Store Employees

Agency Prepares 'Clip Book' To Help Dept. Stores Plan Household Appliance Advertising

ATLANTIC CITY, N. J.—A new product illustration service that will supply appliance dealers pen and ink drawings of nationally advertised products for their use in preparing advertising copy has been inaugurated here by Harry Volk Jr., Advertising, Schwehm building here.

Called the National Brands Clip Book, the original volume contains more than 450 illustrations of a variety of nationally advertised products done on 8½ by 11 in. paper and filed alphabetically in a heavy loose leaf binder.

Supplements to the clip book will be issued monthly on a subscription basis at a cost of \$1.49 per month,

according to Volk. Provision has also been made for the replacement of pages that become mutilated through frequent clipping, he added.

The drawings, Volk said, can be quickly translated into line engravings in a wide range of sizes. Kromo-lite washes or Ben Day screens may be added to fit the advertising technique of individual stores.

Although the clip book was designed primarily for department stores and newspapers, it leans very strongly to hard goods in general and appliances in particular.

Features of the book, he noted, are the versatility of the illustrations, ease of filing, and economy.

of America and its president, Samuel Wolchok.

The defendants were accused of:

1. Distributing circulars in or near Vim's various stores and staging large demonstrations during normal business hours, thereby disrupting business.
2. Distributing other leaflets to the general public which claimed Vim was unfair to the unions, tending to undermine the plaintiff's business.
3. Threatening to continue such

acts in violation of provisions of the Taft-Hartley Act, ignoring the 60-day waiting period, and not affording the Federal Mediation and Conciliation Service an opportunity to act in the case.

Solomon called the suit an attempt to evade collective bargaining. He claimed the union, seeking to avoid a strike, tried to advertise its efforts to get Vim to negotiate in good faith and abide by the decisions of arbitrators.

No defrosting



① Dual-Temp Home Freezer really quick-freezes at 15° below zero. Stores up to 70 lbs. of frozen food safely for months. A big home freezer right in your refrigerator!

② Dual-Temp Moist Cold Compartment never requires defrosting! High humidity keeps food fresh and moist without covering dishes. Lots more room for foods!

③ Dual-Temp Sterilamp kills germs... helps preserve food longer.

④ Dual-Temp Moistrol... the drip tray that automatically empties itself. Many more outstanding features... see Dual-Temp at your Admiral dealer, today.

ONLY DUAL-TEMP GIVES YOU ALL 4 FEATURES!

ADMIRAL ELECTRIC RANGE

America's most beautiful electric range with simplified automatic cooking. Just 3 controls to set... cooks while you're away! Large, flexible oven provides 17 different crack positions. Flex-O-Heat "no-skip" controls give the exact amount of heat needed. See the Admiral today!

Admiral

DUAL-TEMP Refrigerators

Performance proved in over 200,000 kitchens!

1ST IN LINE AT THIRST TIME!

OASIS—made by the world's largest maker of electric drinking water coolers—is first in line when it comes to delivering complete thirst relief at low cost. Write for details.

The ERCO Manufacturing Co.
401 W. Town St., Col. 8, Ohio



NIAGARA

AEROPASS* CONDENSER

... increases refrigeration plant capacity; saves power and water. Patented features: "duo-pass" coil keeps condenser tubes free from scale; "oilout" constantly cleans oil and dirt from the refrigerant. "Balanced Wet Bulb Control" maintains minimum practical compressor head pressure.

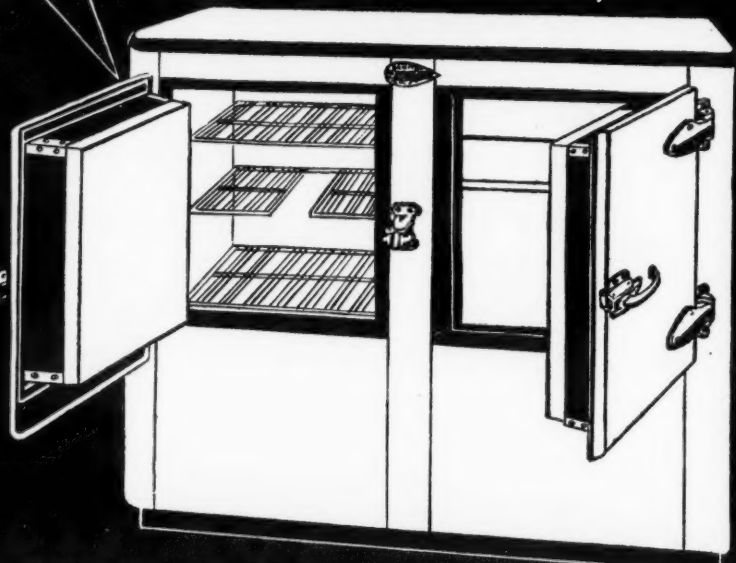
NIAGARA BLOWER COMPANY
30 Years of Service in Air Engineering
405 Lexington Ave. New York 17, N. Y.
*Trade-mark registered

Quicfreez TRIZONE

NORMAL
REFRIG.
TEMP.

SANITARY'S PREWAR COMBINATION
Farm Freezer is again available for
immediate shipment. . . . Suggested
consumer price only \$399.50. . . .

FAST
FREEZE



MODEL NO. C-1148

4½ cu.ft. of 35-50°F. Refrigeration combined
with 6¼ cu.ft. of zero frozen storage.
Size: 48½" w. x 28" d. x 40¾" h.
Frozen meat capacity - 250-300 lbs.
¼ H.P. hermetic, quiet-type condensing unit
60 cycle 115 volts A.C.

FROZEN
STORAGE

SANITARY REFRIGERATOR CO.

FOND DU LAC, WIS.

ICE REFRIGERATORS FOR MORE THAN 40 YEARS

FARM FREEZERS SINCE 1939

INSIDE DOPE

by GEORGE F. TAUBENECK

(Continued from Page 1, Column 1)

165,000,000, which, they believe, will occur twenty years hence. But the N.I.C.B. disagrees with this outlook, declaring that "the present surge of births now indicates a peak 10,000,000 to 25,000,000 higher." This summit will be reached some time following the year 2000, it is guessed.

With an eye toward future effects of the growing birth rate, the report continues:

"The significance of a large population to businessmen and government can hardly be overestimated. Manufacturers of children's clothing and toys, obstetricians, and hospitals obviously are immediately affected. Some of the deferred effects of the boom in birth rates will be felt by an increase in the number of students entering schools during the coming years. A 20% increase in births in 1946 portends, roughly, a 20% increase in labor-force entrants in the mid-1960s. The number of marriages should increase substantially twenty to twenty-five years hence. . . . This will cause a corresponding increase in demand for housing.

"An extremely important aspect of the population growth to the Federal government is the size of that group of the population in the draft age. The percentage of the population within this group will be substantially greater in the 1960s and 1970s than it is at present."

The Surprising Mailbag

Upon returning from trips, we never can resist the temptation to go first to the office—no matter if it's two or three o'clock in the morning. Reason: we can't resist the impulse to ruffle through the letters which will be piled on our desk.

Here are some choice ones we found in the last batch. The first one, in our opinion, should be thrust under the noses of President Truman and Secretary Marshall. The second is a prose classic (it's a eulogy of Mahatma Gandhi, written by a Moslem). Third is mighty funny. And that's the way they go.

Italy

Editor:

From the Italian newspapers we learn that Sen. Vandenberg, speaking at Washington on the 1st inst., said that "if Marshall plan fails, the U. S. will not have to blame themselves for it, inasmuch as they could not possibly do better or more."

Now, for and on behalf of many million Italians, we want to express quite a different view on the subject.

We firmly believe that the U. S. could have achieved and still could achieve a great deal more at a cost a great deal less by wielding the same weapons which Russia so successfully wielded to seize upon eastern Europe, to thwart the rebuilding of the war-wrecked economy over western Europe and to bring chaos into free-enterprise countries over the rest of the world.

Namely, instead of spending so many billion dollars to actually finance communistic industries, communistic labor unions, communistic political parties and communistic newspapers, as they have been and keep on doing indirectly at least in Italy, the U. S. ought to spend but a few million dollars in:

1. Promoting and financing political parties, labor unions, and newspapers which are openly and firmly anti-communistic;
2. Enlisting, equipping, and supporting governmental and private 100% anti-communistic police in all countries which are threatened by communism.

Millions of Italians believe for instance that should the U. S. have, in 1946, prevented Italian communism from forcing upon us the escalator clause, the forbidding by law of

labor lay-offs, the endless chain of political strikes and the calamitous inflation therefrom arisen, Italy would today be altogether back on her own feet.

And all this seems so simple and clear to us that we cannot understand how and why neither the American Government nor the American people could not have grasped it long ago.

(NAME WITHHELD BY REQUEST)

Melchior, Armstrong, Dessau Co.
Ridgefield, New Jersey

Editor:

A few days ago we received a letter from Mr. Fazelbhoj of Bombay which so impressed me that I cabled him for authority to publish extracts therefrom. This morning I received his authority to do so.

If you feel that Mr. Fazelbhoj's letter will be of interest to your readers you have authority to use it.

ARNOLD DESSAU,
President

I wish to acknowledge receipt of your letters up to Nov. 21, 1947. The delay in answering was due to my being frequently out of Bombay and also due to the political events that were occurring in this country which culminated in the cruel assassination of our revered leader Mahatma Gandhi. To me his life was like the second coming of the Christ in this world. Like Buddha he had renounced everything that man loves to possess and enjoy. He used more skillful strategy than Napoleon of Non-violence to win India's freedom from the stronghold of the world's greatest Empire. Like Mohamed he gave law to mankind to live in happiness. Like Lincoln he fought for freedom and emancipation of the suppressed peoples and raised them to the status of equality with all men. Like Christ he consoled the outcast and lowliest and comforted those mentally sick and physically diseased. In fact he was the Messiah whose coming the scriptures had predicted to save mankind in this Atomic Age by his penance and preachings and he gave mankind the greatest religion of all times, that of "Truth."

I believe the supreme sacrifice of his life will now bring peace and unity to this unhappy land and India will march forward in front

(Continued on next page)

For All Three

...get **Kelvinator**



**TROUBLE FREE
PERFORMANCE!**

COMPETITIVE PRICE!

USER ACCEPTANCE!

In buying condensing units, experienced servicemen like to see:—a name that customers know means quality . . . performance that's completely dependable . . . and a price that meets competition. These are the three big reasons why they choose Kelvinator!

Precision-tested during production, Kelvinator condensing units come to you ready to perform dependably . . . under the toughest conditions. Their reputation for dependability is known wherever refrigeration is used—just as the name Kelvinator itself means the finest modern design, engineering, and quality manufacture. It's a name that always sells . . . always satisfies!

Whatever your refrigeration requirements, call on one of Kelvinator's 50 convenient supply depots. Each carries a complete stock of condensing units, refrigeration parts and supplies, competitively priced. You'll like the fast, friendly service at Kelvinator . . . Kelvinator, Division of Nash-Kelvinator Corporation, Detroit, Michigan.

GET YOUR COPY!

Here's a new catalogue for the quick, easy way to buy refrigeration parts and supplies. All information and prices are grouped for easy reference. Ask for it at your local Kelvinator Distributor's or Zone Office.



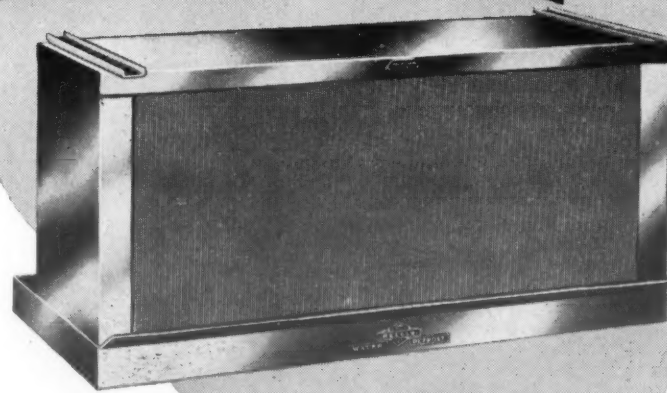
Kelvinator

CONDENSING UNITS
REFRIGERATION PARTS AND
SUPPLIES



BUY KELVINATOR FOR ALL YOUR REFRIGERATION REQUIREMENTS

"Recold" WATER DEFROST



HUMID AIR
EVAPORATORS

"Recold" water defrost humid air evaporators present an unusual but dependable method of defrosting by using ordinary tap water. It assures complete defrosting of any temperature below freezing in less than five minutes without any product warm-up.

An ideal coil for any type of low temperature application or installation, it is particularly adaptable for ice cream hardening rooms or for frozen food walk-in refrigerators or storage rooms.

Only "Recold" or their authorized licensees can provide the water defrost coil because it is fully protected by U.S. patents.



**REFRIGERATION
ENGINEERING, INC.**

7250 East Slauson Avenue, Los Angeles 22, Calif.

INSIDE DOPE

by GEORGE F. TAUBENECK

(Continued from preceding page)

rank with other nations of the world for evolution and advance of man and his civilization. Only on the 12th February we performed his last ceremony and we are now getting ready to work on the lines of his message that he preached all his life and in implementing his teachings.

AHMED A. FAZELBOHY

National Electrical Retailers
Association
Chicago 54, Ill.

Editor:

You've probably been swamped with gags from readers ever since "One Foot in the Door" saw light of day. But here's a true story on house-to-house selling that I think will amuse you. Credit for what it's worth due my kid sister in California.

"I got so sick of answering the bell just for peddlers that I made myself a nice printed note in a plastic envelope and tacked it on the door-frame above the bell. It says:

'Before you ring this bell

Please note:

'I am a busy homemaker.

'I want no venetian blinds.

'I do not want to buy books or magazines.

'Thank you for not bothering me!

"The other day one of those crackpot guys who comes around and plays a religious record on his portable phonograph came to the door. He read my sign and went away. Later when I went out on the porch I found this pencilled on the white woodwork above my sign:

'Do You Love Jesus?'"

VIVIAN ACORD,
Public Relations Director

Let the Papers Pile Up

Editorial Director Phil Redeker, whose desk is piled even higher with letters and work-in-progress than our own, handed us this clipping from

The Curtis Courier with evident relish:

"Let there be no mistake about it, the editor of this publication is one who practices the clean desk philosophy. He really is an orderly cuss, with a good-housekeeping mind. But he is no bigot. He can appreciate a fellow like Hay Boyle, the newspaper columnist. Pat Flanagan of Florida Power Corp. sent us one of his pieces dealing with 'cluttered desks. He argues that clean-desk advocates are worriers and get stomach ulcers. If that be true, we've been short-changed. Up to date there is no sign of an ulcer.

"But a man of easy conscience and a good digestion," says Boyle "just lets the papers pile up on his desk. He ruminates well and doesn't jump into hasty decisions. Every day or so some of the letters get pushed off into his lap. By then he is ready to answer them with whatever sound and temperate wisdom he owns.

"That was roughly the policy of William Allen White, who genially maintained throughout his long life a desk that would have been the anguish of an efficiency expert. Yet no newspaperman with a passion for office housekeeping has been able to turn out phrases like the Kansas word wizard.

"The best chefs don't necessarily keep the cleanest kitchens. What advantage is there in keeping a desk top looking like a billiard table minus the cue ball? The only real excuse for cleaning off the litter is to make space for a man's feet so he can settle back in his chair for some real knotty thinking."

Amen, brother!

The Communists have only one goal—world revolution. That is the theme of a report just released by the House Foreign Affairs Subcommittee on National and International Movements.

The subcommittee, headed by Rep. Bolton, of Ohio, gave this analysis of the fix we're in:

(1) The Communists have one goal—world revolution.

(2) They assume that the revolution will be violent.

(3) They are incapable of accepting the idea that peace can endure from now on, and they expect one more catastrophic war.

A COMPREHENSIVE LINE

Cutler-Hammer Refrigeration Replacement Control

The Cutler-Hammer line of Refrigeration Replacement Control is unusually comprehensive and complete. One unit alone, the *Universal* unit, will handle 60% of the repairman's needs. In rare cases where exact replacement control must be furnished, that item also will be found in the Cutler-Hammer line, individually packed, clearly labelled, complete with dial plate, mounting screws, trim washers and instructions for mounting, and range and differential adjustments.

The Cutler-Hammer Line of Refrigeration Replacement Controls is the product of more than 50 years of fundamental control specialization... another reason why outstanding refrigeration wholesalers recommend it and alert service organizations from coast to coast feature and use it....



CUTLER-HAMMER, Inc., 1362
St. Paul Ave., Milwaukee 1, Wis.

This One Universal unit alone covers 60% of all needs.

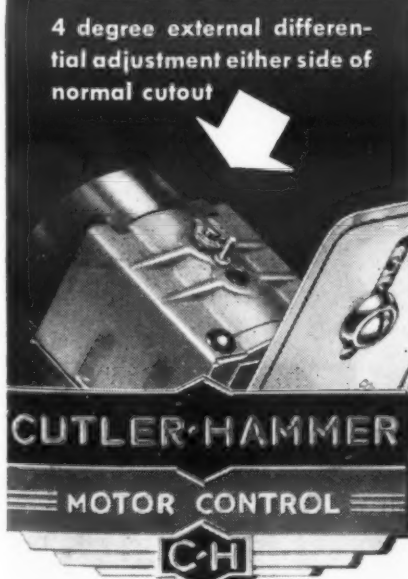
← Bul. 9521N9

Adjustable Mounting Brackets
Maximum Mounting Centers...4-3/16
Minimum Mounting Centers...2-3/16

Adjustable Cutout Feature—Differential can be increased 4 degrees by turning indicator in "Hi" direction and decreased 4 degrees by turning in "Lo" direction.

Adjustable Range—Turning screw clockwise lowers settings and counter-clockwise raises settings.

Operating knob can be adjusted to meet various evaporator scale settings. New knob is ideal for varying shield thicknesses. Makes this control adaptable to wider range of single dial replacement jobs where overload is not required in unit.



DOMESTIC, SEMI-COMMERCIAL AND COMMERCIAL CONTROL

(4) The Soviet Union is regarded as the main force of the revolution.

(5) They fear a coalition against the Soviet Union.

(6) They, therefore, fear reconstruction or federation in the non-Communist world.

(7) They utilize the most modern and effective means of cold warfare to strengthen their own forces and

to weaken all others.

(8) The Communist parties outside the Soviet Union are junior partners or auxiliaries.

(9) The tactics are based upon a definite theory, and the central propositions of that theory do not change.

(10) The division of Europe and Asia between the victors of World

War II is to be settled by power politics, not negotiation.

The report suggests two positive counter-measures which we can take against Communism: (1) the first and most indispensable thing we have to do is to keep our economy on an even keel, and go forward without a depression; (2) we must clarify our own arguments, state them publicly.

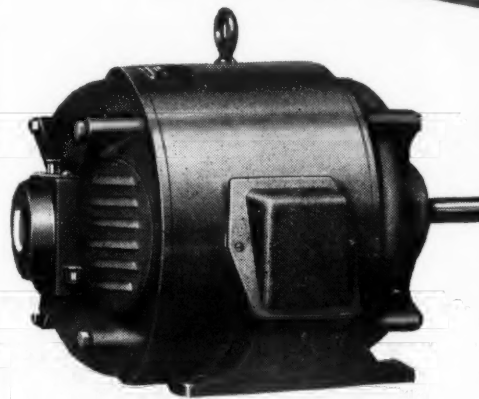
TRAFFIC CENTER

● The meat department is the focal point in food stores. SHERER display cases naturally attract the flow of traffic by making possible outstanding displays of perfectly kept meat.

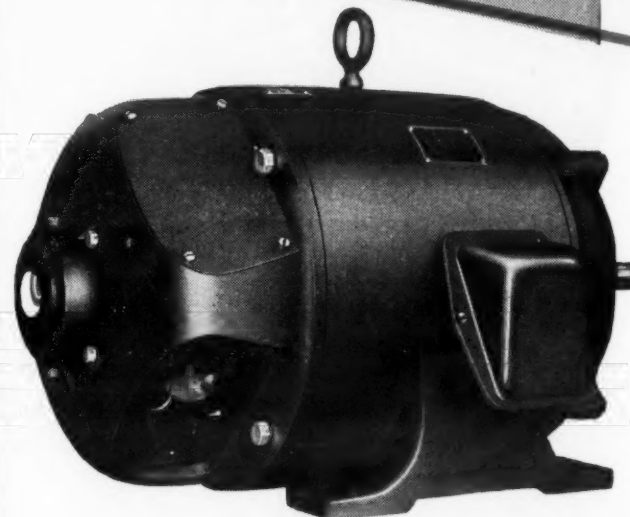


REFRIGERATED MERCHANDISERS

SHERER-GILLET CO., MARSHALL, MICHIGAN



Illustrates Century 3 horsepower type RS and smaller motors.



Illustrates Century 7 1/2 horsepower type RS motors.

Century

Repulsion Start Induction
Brush Lifting Single Phase

Motors START HEAVY LOADS

Century Type RS motors are widely used to drive all kinds of motorized equipment wherever single phase power is distributed, particularly in suburban or farm districts. They have been satisfying owners for more than 43 years.

Because repulsion start motors have the highest starting torque per ampere of any single phase motor, they are ideal for equipment that must start under full load.

Century single phase motors are built in sizes up to 20 horsepower and other types in a wide range from 1/6 to 400 horsepower to provide top performance to meet every electric power application.

Specify Century for all your electric power requirements.

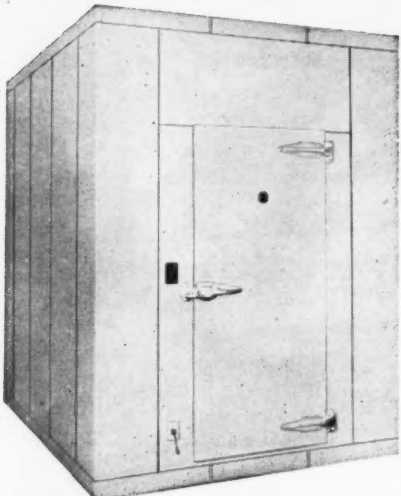


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Offices and Stock Points in Principal Cities

MIRACOOOL

WALK IN COOLERS



Versatile

Here is the cooler that only many years in the refrigeration field could produce. This versatile, all-purpose, steel walk-in cooler can be used for beverage storage, vegetable storage, or with quarter rails and shelf for meat storage. Constructed in sections for quick, easy installation . . . it's a cooler in a class by itself.

Exterior of heavy gauge cold rolled steel. Interior lined with heavy non-rust galvanized steel. It has four inch Fiberglas Insulation, heavy hardware, and wood floor racks over a steel floor. Interior light is on an outside switch.

Write for new illustrated folder and price list containing information on all the Miracool Walk-In Coolers.

The CLEVELAND REFRIGERATOR CO.
2901 EAST 65th STREET • CLEVELAND 4 OHIO
Manufacturers of Custom-Built Refrigerators Over A Quarter Century



At Packers Convention:

Pushing Frozen Foods Actively Can Lead To Million Freezer Sales a Year, Jones Claims

CHICAGO—"If the (frozen food) story can be told properly, I'm sure we can get you a million new owners of home freezers each year, and I assure you that each will be an eager customer for you."

This conviction was expressed at the recent National Frozen Food Industry Convention here by W. Paul Jones, vice president in charge of the refrigeration division of Philco Corp. The convention and concurrent exposition were sponsored by the National Association of Frozen Food Packers.

But Jones warned the industry that it must "more aggressively support your own business" if such a goal is to be achieved.

"We're not just sure yet," he said, "but we fear we see some decline in public interest from the high peak of romanticism that should be maintained and which was so characteristic in earlier, recent years. And so we think you had better look to your laurels. . . ."

"We think the public must be made to understand more about frozen foods in their many and ramified aspects. And so, if there is at present, because of divided interest, any lack of aggressive partisanship in the promotion and advertising of frozen foods, it may possibly spell the doom of this new, but sound, culinary innovation."

Jones urged the industry to cooperate with the home freezer industry in telling the public more about frozen foods, telling them oftener, and in more effective ways. He pointed out that the freezer industry is already "your greatest sales factor" because of its constant promotion of frozen foods in order to sell home freezers.

"With your help, your activity, we will have much more to build on, we can do far more effective work at our job of selling home freezers, which is really but another way of saying, making bigger, more consistent users of frozen food for you," he said.

Probably no one will seriously question that the more freezers sold, the greater will be the market for frozen foods, he declared.

"For your own surveys have shown that as a purchaser of frozen foods, the freezer owner is a better customer for you by almost ten fold," he said.

"I don't think there can be much doubt when our company alone sold nearly 100,000 home freezers last year, that we created a measurably greater demand for your product. I don't think there can be much doubt when our industry sold more than 500,000 home freezers last year, that we stepped up the usage of your product by those families that bought them. . . ."

"But even if you did question it as an immediate fact, the ultimate goal and destiny of your industry—your product—would still be tied closely to the goal and destiny of our home freezers."

Objective Is Common One

"For each have a common objective—the universality of frozen food usage, and that can only be achieved by the almost complete universality of some form of home freezer ownership."

Jones assured the convention that freezer manufacturers welcome this relationship and have adopted a positive and constructive approach to frozen foods, "an approach that tends to unite in the customer's consciousness the idea of the frozen state with the idea of better food, constantly available to the user through the medium of the home freezer."

"Really," he emphasized, "there is no other way we can sell home freezers. We must extol the superior qualities, we must publicize and promote all the merits of frozen foods."

But, he said, "sometimes I think we may be overdoing it a bit."

"Sometimes I think we are more partisan than are the packers and distributors and retailers as a whole—themselves," Jones asserted. "For it's true that nearly all packers, many distributors, and nearly all retailers have a divided interest in the food business generally."

"Now it's probably natural that the frozen food industry would attract and largely be started by people and firms already in the food business. . . ."

"But the time comes, and I'm not sure that it is not already at hand, when partisanship and loyalty to a single purpose, to a single idea, is needed to take frozen foods usage beyond its first general degree of acceptance and on to its ultimate universal usage."

Although the home freezer makes a "real customer" for the frozen food industry out of the part-time buyer, manufacturers do not ask, expect, or want the industry to sell freezers for them, Jones stressed.

"But we do need some help from you in other directions," he continued. "We need some support in our efforts that we are not now getting. And that support which will help us most is for you to more aggressively support your own business."

More 'Shouting' Needed

Jones said that he and many others in the freezer industry "do not understand why you do not see the necessity for shouting the advantages of frozen food usage, over and above the advantages of any other form."

"It's a good question why the frozen food industry has not 'ding-donged' into the ears of every housewife in this land—by radio, magazine and newspaper ads, billboards and any and all other forms of advertising . . . 'that most frozen foods require only about half the cooking time to prepare as compared to other forms.'"

"That theme should be number one on the 'Advertising Hit Parade' for frozen foods. That theme sells freezers for us—certainly it can do infinitely more for you if given all the prominence it deserves."

Jones then enumerated other arguments for frozen food usage which the freezer industry tells "a thousand times a day" in selling home freezers and which the frozen food industry should emphasize.

He said these things must be told because relatively few people know them and accept them for basic truth.

"If they did," he remarked, "you and three times as many of you would not be able to pack enough to supply the demand. And we—the freezer manufacturers—know they do not know it, because it becomes our sales story repeated over and over, and our strongest clinching argument in nearly every attempt to sell a freezer."

In addition to home freezers, the refrigeration industry built and sold almost 4,000,000 kitchen refrigerators last year, Jones recalled. He

(Concluded on next page)

IN MODERN REFRIGERATION

SELL

- Ample Storage Space
- Adequate Frozen Storage
- More Modern Conveniences
- Quiet Operation
- Operating Economy
- Long-Time Satisfaction
- Greater Value

FIBERGLAS* HELPS YOU, 2 ways!

HERE'S WHY!

Helps make better refrigerators and freezers! Helps you sell them in quantity and at a profit!

Fiberglas not only contributes substantially to many of those features desired by home-makers . . . quicker freezing, economical operation, longer trouble-free service, greater value . . . but it helps you establish and put these points across. For your customers know Fiberglas. Know it as an efficient, ageless insulation that stays in place—doesn't settle. *It's a smart dealer who remembers this and uses it in his selling.*

A GOOD FEATURE TO HAVE...A GOOD FEATURE TO SELL!

OWENS-CORNING
FIBERGLAS

THERMAL INSULATION

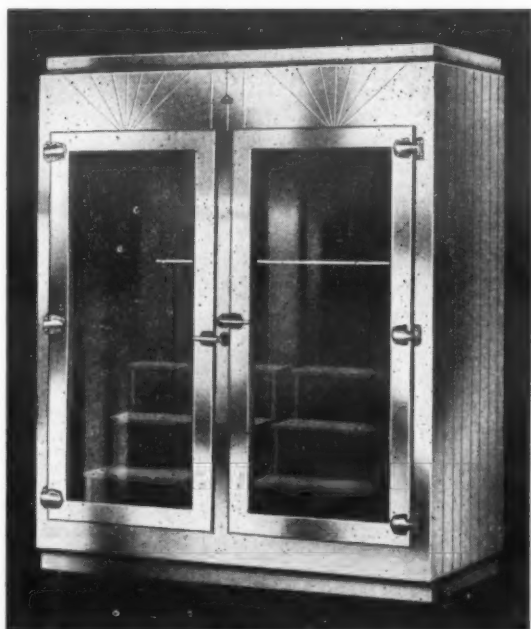
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AVAILABLE
IMMEDIATE
DELIVERY
With
Hinged and Sliding
Doors
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REFRIGERATORS**



GEM REFRIGERATOR CO.

2539 Germantown Ave.
PHILADELPHIA 33, PENNA.

Freezer User Becomes Better Frozen Food Customer If He Understands the 'Story'

(Concluded from preceding page)
said nearly every one had a frozen food compartment, "some bigger, some smaller, but every one spelled it right out for the user—'FROZEN FOODS.'"

"We want them to use that compartment as we intended when we designed it," he said. "We know if they do use it as intended and really get interested in frozen foods, that compartment will soon be too small and they will then be a prospect for a freezer."

Tremendous effort and education is needed on the commercial aspect of freezers and frozen foods, too, the Philco executive pointed out. He said this market is hardly scratched because restaurant managers, chefs, club stewards, and others serving food commercially "do not yet understand the immense savings and simplification that frozen foods offer."

"Let me tell you of just one incident to illustrate," he continued.

"One of the clubs of which I am a member in Philadelphia has consistently lost money in serving food. It is a large club. . . . Like all such places, it must have food on hand, some of it already prepared for an almost unlimited number of people who may come to dine. Yet they do not know how many will come. . . ."

"We have had a really bad winter in Philadelphia and the club's losses during the last three months have really been staggering because each time a large crowd was expected, the weather turned bad. So I was called in to make recommendations on how to cut down such losses."

"I found they had an old eight-hole ice cream freezer in which they kept a few varieties of frozen food. And I found that they had been using some good brands and some that were not."

"But the startling thing I found was that not one of the distributors serving the account had been wide awake enough to sense a real opportunity. Not one had suggested the installation of proper large-size storage freezers and a plan for using

frozen foods that would save the institution their large losses. . . .

"Now that club has 100 cu. ft. of freezer space ordered. Now they will buy frozen poultry and frozen fish . . . frozen vegetables . . . frozen meats. . . . The potential saving is enormous and there must be thousands of places in the same trying circumstances where this same solution would apply."

Turning to ways in which the frozen food industry can more effectively promote its products, Jones offered these suggestions:

Sponsor frozen food cooking schools, give a free sample supply of choice frozen foods to each new purchaser of a home freezer, and put out bulletins and educational leaflets to go to each new freezer owner. He also recommended that a co-operative information bureau be set up with all home freezer dealers to learn the name and address of each new freezer purchaser.

"Then have a home economist from your home service bureau, or make deals with local home economists on a fixed fee per call basis, to call on that new owner and give her a real education in frozen foods and how to use them best in conjunction with her new freezer," he proposed.

Jones told the convention not to worry about whether people buy home freezers mainly to freeze their own products or produce they purchase or to store commercially-packed foods.

"For if you will but stop and think," he explained, "you will realize that today nearly everything cooked within a home is commercially packed. Yet only a few decades ago nearly all foods were home prepared and home packed for out-of-season use."

"Isn't it patent then that whatever they have in mind when they buy the freezer, it will only be a matter of time, perhaps longer, perhaps shorter, depending upon your aggressiveness, that they will succumb to the greater convenience and desirability of the commercial pack?"

He also advised the convention that the size and shape of freezers is not

too important. He said the important thing is to promote ownership.

But, he suggested, "get the freezer into the kitchen if possible and even though it does have to be quite small, more frequent usage and better rotation of foods will make the owner a whopping big customer."

"And you know," he observed, "that the smaller investment the customer need make, the more chance we have for ownership in large numbers."

Jones asked, too, that the frozen food industry help teach people not to hoard frozen foods—not to fill

the freezer and then go on living and eating day by day from the grocer's delivery.

"For a freezer serves its owner best and will be a bigger asset to you if foods rotate in and out just as they do from the family kitchen refrigerator," he said.

"In all these things I have asked your cooperation," Jones concluded. "I have asked for it in the name of the freezer industry—and I ask for it in the name of Philco Corporation which builds a larger quantity of home freezers than any other company."

Maximum EFFICIENCY • Minimum ATTENTION



Precision manufacture gives Larkin refrigeration products life-time top performance and lasting fortitude. Made by the originators of the patented Cross Fin Coil, Larkin is the recognized leader in precision manufacture of Larkin Humi-Temp Forced Convection Units—Bare Tube and Zinc Fused Steel Plate Coils—Air Conditioning Units—Instantaneous Water Coolers—Evaporative Condensers—and all other equipment factors used in dependable commercial and industrial refrigeration.



LARKIN COILS 519 MEMORIAL DRIVE • S.E. ATLANTA • GEORGIA

Three Strikes ON COMPETITION

The Sunroc dealer or distributor steps to the mound with three dramatic advantages over competitors and their products. *Here's the pitch:*



1. ADVANCED ENGINEERING

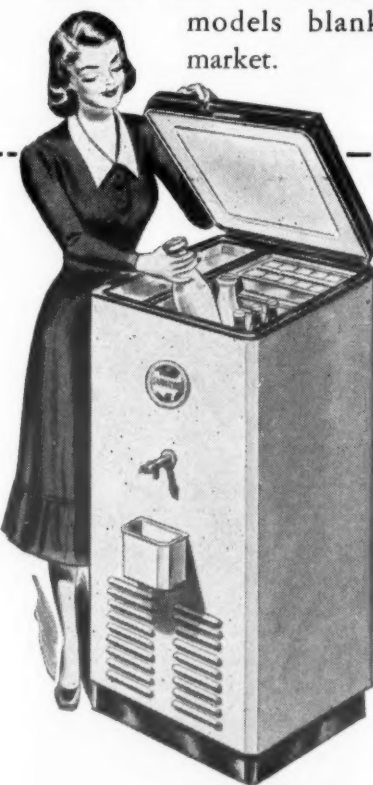
Sunroc is years ahead of the field . . . offers exclusives like the sensationally different Sunroc Super Cooler: a water cooler with generous refrigerated storage and ice-cube capacity. And the static condenser—used for the first time in mass production to give quieter and more economical operation with greater dependability and efficiency.

2. SPECIALIZATION

Sunroc specializes in water coolers . . . sizes up the needs of business, industrial, and institutional users . . . supplies them with quality coolers tailored to their specific requirements, styled in the modern manner. Sunroc's sensational 17 models blanket the market.

3. HIGH VOLUME

The sheer superiority of its product has made Sunroc America's foremost line of water coolers. Production line efficiency has cut costs to the point where Sunroc consistently undersells comparable models.



SUNROC SUPER COOLER

Combination water cooler and refrigerator. Three ice-cube trays; ample refrigerated storage space; unfailing source of properly chilled drinking water.

SUNROC JUNIOR ECONOMY COOLER

The industry's lowest-priced pressure cooler. Capacity 5 gallons per hour. Ideal for smaller offices and establishments of all kinds.



FOR LIVE WIRES ONLY!

BUXTON OFFERS

3 GREAT NEW REFRIGERATORS

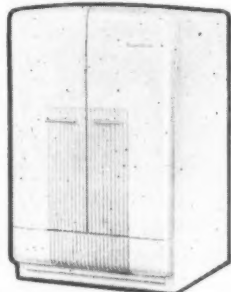
- NEW ENGINEERING FEATURES
- NEW STREAMLINING
- COMPACT DESIGN

WE WANT DISTRIBUTORS

We will franchise alert distributors and dealers for this market-designed line . . . a really unusual opportunity to deliver top-quality merchandise to an established market.

TOP SALES FEATURE

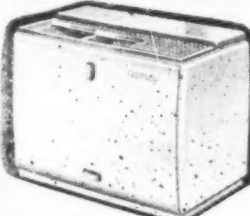
Space Requirement of Average 12 cu. ft. Refrigerator—Yet Provides Almost TWICE the Capacity



Combination—Half Zero Half Normal—19 cu. ft.
All Zero—18 cu. ft.

WRITE OR PHONE TODAY

For complete details—descriptive literature, price lists, territories available write or phone E. George Sanders, General Sales Mgr. at 3120 N. Main St., Dayton, Ohio. (Temporary nat'l sales office.) Phone Randolph 2147.



Buxtonaire Dry Cooler for Bottled Beverages and Food Products.

Manufactured by

BUXTON, INC.

1900 E. 48th St., Los Angeles 11, Calif.
(Phone Lucas 8158)

There's a place on this winning Sunroc team for *you* . . . in time for the next inning now coming up. Mail the coupon today for full details about the Sunroc line, Sunroc values, Sunroc factory support . . . all wrapped up in the much-wanted Sunroc franchise.

America's most complete line of water coolers, \$199.95 up, F.O.B. Glen Riddle, Penna.

SUNROC
Water Coolers

GLEN RIDDLE, PA.

"SUNROC SERVES THE WORLD . . . a Cool Drink of Water"

Distributors throughout America and in 30 Foreign Countries

Branch Offices in Principal Cities

SUNROC REFRIGERATION COMPANY GLEN RIDDLE, PA.

Please send me, without obligation, complete information about the Sunroc line and Sunroc's personalized sales service for ☐ Dealers ☐ Distributors. (Check which.)

Company _____

Address _____

City _____

Zone _____

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Address to Mr. _____

(AC-4)

COOLS MILK FAST FROM 95° TO 45° IN ONLY 30 MINUTES

The Woggle-Scrub cools 5 to 60 gallons of milk in accordance with the strictest milk-cooling codes. By reducing the handling to a minimum, maximum sanitation and wholesomeness can be preserved positively — economical in initial and operating costs.

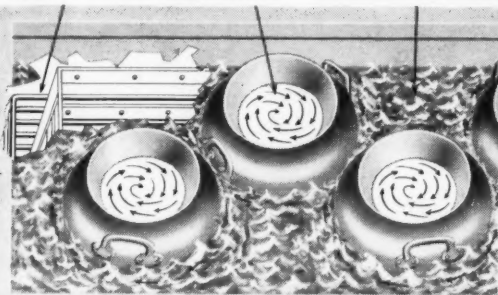
The Woggle-Scrub circulates milk inside the cans in addition to agitating the refrigerated water outside the cans.

Write for fully descriptive literature.



Accommodates 6 ten-gallon cans or 9 five-gallon cans, or combinations thereof. Agitated milk bathes against cold surfaces of cans refrigerated by agitated water.

ICE BANK 4 SIDES MILK CIRCULATION WATER CIRCULATION



WOGGLE-SCRUB
Circulating Milk Cooler
manufactured by
THE WARREN COOLER CORPORATION
P. O. Box 873 Atlanta 1, Georgia

How can you possibly beat Bundyweld* for refrigeration tubing?

Here's the tubing that fits your refrigeration picture better than any other. Look over a length of Bundyweld Steel Tubing—closely. Notice the exclusive Bundyweld construction: double-walled from a single strip.

For you, this means a thinner-walled, faster-cooling, extra-strong tube at low cost. Try it for condenser and evaporator coils, for compressor and connecting lines. Contact your Bundy distributor or representative, or write: Bundy Tubing Co., Detroit 14, Mich.

BUNDYWELD'S DOUBLE WALL
FROM ONE STEEL STRIP
HELPS MAKE THIS COMMERCIAL
CONDENSER EXTRA STRONG

- Thinner walls — faster cooling
- Low cost
- High fatigue strength
- Close tolerances



EASY AND FAST
BENDING, CUTTING,
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ENGINEERED TO YOUR EXPECTATIONS
*REG. U. S. PAT. OFF.

WHY BUNDYWELD IS BETTER TUBING

- 1 Bundyweld Tubing, made by a patented process, is entirely different from any other tubing. It starts as a single strip of basic metal, coated with a bonding metal.
- 2 This strip is continuously rolled twice laterally into tubular form. Walls of uniform thickness and concentricity are assured by close-tolerance, cold-rolled strip.
- 3 Next, a heating process fuses bonding metal to basic metal. Cooled, the double walls have become a strong, ductile tube, free from scale, held to close dimensions.
- 4 Bundyweld comes in standard sizes, up to 3/4" O.D., in steel (copper or tin coated), Monel or nickel. For tubing of other sizes or metals, call or write Bundy.

BUNDY TUBING DISTRIBUTORS AND REPRESENTATIVES:

Pearson-Deakins Co. 823-824 Chattanooga Bank Bldg. Chattanooga 2, Tenn.	Lapham-Hickey Co. 3333 W. 47th Place Chicago 32, Ill.	Rutan & Co. 404 Architects Bldg. Philadelphia 3, Pa.	Pacific Metals Co., Ltd. 3100 19th St. San Francisco 10, Calif.	Eagle Metals Co. 3628 E. Marginal Way Seattle 4, Wash.	Alloy Metal Sales, Ltd. 881 Bay St. Toronto 5, Canada
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Bundyweld nickel and Monel tubing is sold by International Nickel Company distributors in all principal cities.

Government Publishes Details of Its Order Charging M-H with Federal Trade Violations

WASHINGTON, D. C.—Details of the cease and desist order issued in January to Minneapolis-Honeywell Regulator Co. by the Federal Trade Commission, directing the firm to put a stop to eight specific practices which the agency ruled unlawful, were published in a recent issue of the Government publication, Federal Register.

FTC concluded that the company violated provisions of the Federal Trade Commission Act, section 3 of the Clayton Act, and subsection (a) of section 2 of the same act as amended by the Robinson-Patman Act.

Charging Minneapolis-Honeywell with dealing on an exclusive and tying basis, discriminating in price directly and indirectly, and using patents, rights, or privileges unlawfully, FTC ordered the firm to cease and desist from:

"1. Selling or making any contract for the sale of automatic temperature controls on the condition, agreement, or understanding that the purchaser shall purchase as many limit controls as primary controls.

"2. Selling or making any contract for the sale of automatic temperature controls on the condition, agreement, or understanding that the purchaser thereof shall purchase 90% as many thermostats as primary controls.

"3. Entering into, continuing, or carrying out any agreement or understanding which requires a purchaser to buy any number of limit controls or thermostats with the purchase of respondent's primary controls: Provided, however, that nothing herein contained shall prohibit the respondent from selling its automatic temperature controls in sets at a specified price per set.

"4. Licensing or otherwise authorizing the use of the furnace control system covered by the Cross Patent on the condition, agreement, or understanding that only automatic

stoker switches manufactured or sold by the respondent shall be used in such combination.

"5. Licensing or otherwise authorizing the use of the furnace control system covered by the Freeman Patent on the condition, agreement, or understanding that the combination furnace control or any other control used in such system be sold at the price established by the respondent.

"6. Using any patent covering a system of furnace controls to require the purchase from respondent of any unpatented control used in said system or requiring the maintenance of prices established by the respondent for any such unpatented control."

It was further ordered that Minneapolis-Honeywell cease and desist from "selling or making any contract for the sale of primary controls on the condition, agreement, or understanding that the purchaser thereof shall not use with such primary controls any limit controls or thermostats other than those acquired from respondent or from some source authorized by respondent."

FTC also ordered the concern to cease and desist from "discriminating, directly or indirectly, in the price of such products (automatic temperature controls or other furnace controls) of like grade and quality as among oil-burner manufacturers purchasing said . . . controls:

"1. By selling such controls to some oil-burner manufacturers at prices materially different from the prices charged other oil-burner manufacturers who in fact compete in the sale and distribution of such furnace controls, when the differences in price are not justified by differences in the cost of manufacture, sale, or delivery resulting from differing methods or quantities in which such products are sold or delivered."

The company was given 60 days in which to comply with the commission's order.

Volkenant Cites Future of Electronics For Controlling Temperature and Dust

CHICAGO—What have the engineers dreamed up for the home of today and tomorrow in the way of electronic products?

An outline of electronic things to come or already here was sketched at the recent Chicago Technical Conference by Gordon Volkenant, associate director of research for Minneapolis-Honeywell Regulator Co., and W. H. Stellner, vice president of the home radio and television department of Motorola, Inc.

Several hundred engineers attending the conference heard the latest information on the "Moduflow" system of controlling room temperature, germ-destroying lamps, automatic "baby sitters," electronic ranges and dust collectors, and television.

Volkenant said the "Moduflow" system is now undergoing tests in markets around Boston, Chicago, and New York City. Sensitive to within one-hundredth of a degree, this system makes the thermostatic control obsolete, he claimed. Its slightly higher cost, he said, is outweighed by the greater savings in operation of the heating unit.

Volkenant predicted that germ-killing lamps will be widely used in homes in the near future. They are already being used in factories, offices, and hospitals, he noted, and have eliminated colds for as long as two years where installed in homes.

Families of Minneapolis-Honeywell employees in Minneapolis were said to now be using electronically-controlled "baby sitters." It was explained that an interphone type of com-

munications system records any noises so that only one of four co-operating neighbors need stay home.

Availability of Raytheon Mfg. Co.'s "Radarange" for the home in three or four years at prices between \$200 and \$300 was seen as a possibility by Volkenant. He said it takes the range only 12 seconds to cook a steak, 15 seconds to bake a loaf of bread, and a very short time to cook a complete meal that had been partially prepared and frozen.

Units that collect dust electronically are now being developed or manufactured by Westinghouse, Raytheon, and American Air Filter.

In the radio and television field, the future holds three dimensional television, colored video, and more advancements in frequency modulation.

D. C. Lingo Co. Moves To New Houston Quarters

HOUSTON, Texas—The D. C. Lingo Co., wholesaler of refrigeration, air conditioning, and heating supplies, has moved to new, larger quarters at 1109 Chenevert St. here, D. C. Lingo has announced.

The new location offers the firm 4,000 sq. ft. of space out of congested traffic areas. For customers there is 25 ft. of counter space and convenient parking facilities. Telephone number is Preston 7372.

The Lingo Co., established in 1932, claims to be one of the pioneers in wholesale refrigeration supplies.

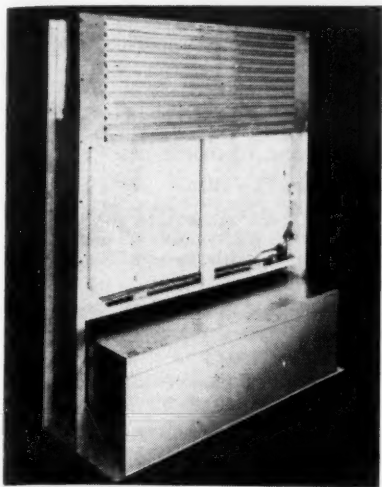
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SERVICE THAT'S UNSURPASSED
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Dependable efficient same-day filling of orders has built our business . . . our reputation. Keep your stocks complete this easy, speedy way . . . just order from our FREE catalog. Saves you time . . . energy . . . money. Prices right. Wholesale only.

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2511 LAKE STREET MELROSE PARK, ILL.

Kold-Hold's Latest



Kold-Hold Packaged Truck Unit

Packaged Refrigeration Truck Unit Introduced

LANSING, Mich.—A new packaged truck refrigeration unit that may be installed by the operator himself has recently been announced by the Kold-Hold Mfg. Co.

According to the manufacturer, this unit makes it possible for the operator to refrigerate his trucks at low cost without complicated installation or operation procedures. The truck refrigeration unit is a complete self-contained refrigeration system.

When installing the refrigeration unit in the truck, it is only necessary to cut two square openings in the floor of the truck; one for the air intake and the other for the discharge. The unit is placed over the openings and is bolted to the floor.

The truck refrigeration unit contains heavy-duty "hold-over" truck plates which are connected to an air-cooled condensing unit. The cooling cycle is started by plugging into any 110 volt electric outlet. Thus, the truck may be charged at any stop or wherever electricity is available. The manufacturer states that this unit will pull down the truck temperature overnight and that the charged "hold-over" plate will then maintain the pre-determined low temperature of the truck throughout the next day's deliveries.

Being a packaged truck unit, it takes up little space. It keeps truck interiors clean, dry and odorless and provides dependable refrigeration at a relatively low cost, the manufacturer declares.

Brosious Will Represent Steiner In Chicago Area

NEW YORK CITY—Steiner Plastics Mfg. Co. here, manufacturer of acrylic resin, has recently announced the appointment of Robert M. Brosious of the J. B. Products Co., Chicago, as its representative in the Chicago area.

Brosious was most recently associated with Rohm & Haas Co. Prior to this he served with E. I. DuPont.

Putting Rosebushes To Sleep In Cold Vaults Helps Extend Selling Season for Nurserymen

TYLER, Tex.—Nurserymen here are elated over the prospects of improved sales of rosebushes, thanks to refrigeration.

The short shipping season has always been a brake on expansion of the large East Texas rose industry, but now refrigeration may extend this shipping season several months.

Unless completely dormant, roses can't be shipped very successfully, so the nurserymen here have always urged that gardeners in the north order in January and February.

Most of them, however, wait until the annual spring garden fever gets them, and so the East Texas nurserymen are usually flooded with orders after the roses are in full bloom and can't be shipped too successfully.

But the big refrigeration plant at Camp Fannin which the Army formerly used is now being employed to keep rosebushes dormant long after their natural blooming time here.

Carloads of rosebushes, as well as bulbs, pecans, and other nursery stock, are now being cooled to 32° F. and held in refrigerated storage, where they can safely stay dormant for several months. This process should extend the rose shipping season until possibly June 1, it is believed.

The rosebushes are stacked in the vaults about 10 ft. high with Spanish moss or wood shavings dampened with water spread over the roots to prevent dehydration.

Millions of bushes can be accommodated in the huge vaults of the former Army plant, which is said to have a capacity of 185,000 cu. ft. A single unit will hold 25 carloads of crated vegetables.

S. M. Fortner of Winona and Charles Shrinklen of Tyler, both of whom served in the plant during the war, are now in charge of its operation.

Worthington Trebles Common Shares; Searle Foresees No Decline In Business

HARRISON, N. J.—Stockholders of the Worthington Pump & Machinery Corp. voted at their recent annual meeting to treble the number of shares of authorized common stock and to split the present outstanding shares three for one.

Authorized common stock thus was raised from 750,000 to 2,250,000 shares. Outstanding shares increased from 308,080.7 to 924,242.

Clarence E. Searle, president of the firm, told the stockholders that billings last year totaled \$84,968,636. He noted that "if we assume a continuance of satisfactory labor relations with a balanced flow of materials and supply, indications are that billings for 1948 will exceed the total for 1947."

"It is difficult for us to foresee any serious decline in the corporation's business for some period of time; first, because of our large backlog of what we believe to be firm orders

and, second, because of the continuing world-wide demand for our type of equipment.

"Improved designs of many of our existing products will be available in the future, together with a number of new items which should prove helpful in maintaining Worthington's position in the industry."

Radiant Heating Firm Adds English Executive

NEW YORK CITY—H. S. O. Bridcutt has recently been named director and executive vice president of Richard Crittall Radiant Heating, Inc. here, according to E. L. Houtz, president.

Also a director of Richard Crittall & Co., Ltd., London, England, pioneer in the radiant heating field, Bridcutt has recently arrived from England.

Comfort is Profitable



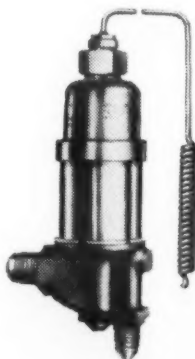
Desire for comfort has been one of the great driving forces of civilization. As soon as man assures himself enough to eat, he sets about improving his comfort. He is willing to spend plenty of money to do it. That desire for comfort can make profit for you and for the users of air conditioning.

Soon people will be flocking to air conditioned stores, movies, taverns, etc. Those who can afford it will be thinking about air conditioning for homes and offices.

Start now to sell air conditioning, and remember "Detroit" Thermostatic Expansion Valves provide the most satisfactory, trouble-free refrigerant control.

Available in the desired capacities, they have the dependability and durability to give long service without attention.

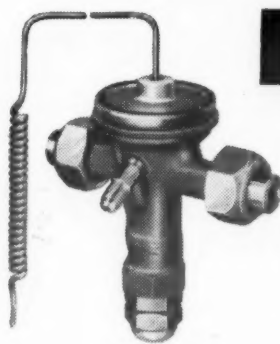
"Detroit" Thermostatic Expansion Valves are gas-charged—which gives them close regulation—guards against motor overload. Often, gas charging makes possible use of a smaller motor, since it does not have to work against excessive pressure during the pulldown period. Gas-charged valves balance the system more quickly when starting up, insuring fast, positive action.



"DETROIT" No. 673

Thermostatic Expansion Valve

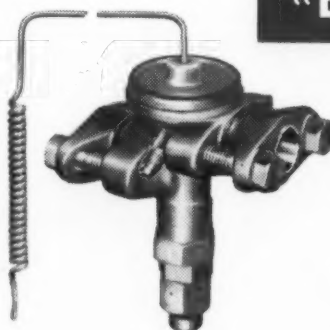
For many years, the standard of the air conditioning and refrigeration industry. Reliability proved by long service. Orifice sizes $\frac{1}{4}$ " to $\frac{1}{2}$ " with capacities up to $3\frac{1}{2}$ tons Freon-12 and 6.5 tons Methyl.



"DETROIT" No. 899

Thermostatic Expansion Valve

An air conditioning or commercial valve of intermediate capacity. Incorporates the features of single diaphragm construction and gas charging. Forged union connections are compact and make removal easy. Capacity 1.5 to 6 tons Freon-12.



"DETROIT" No. 787

Thermostatic Expansion Valve

Representative of the "Detroit" large capacity line. No. 786 is rated 3 to 6 tons ... No. 787—6 to 11 tons ... No. 788—12 to 20 tons Freon-12. These valves have external equalizer connection and can be furnished with No. 790 distributor with 2 to 18 outlets for multiple distribution.

Electrimatic QUICK COUPLER

Just a twist of the wrist makes a connection really tight with the Electrimatic Quick Coupler! Exclusive finger-grip surface allows a firm grip—eliminates the need for tools. Ideal for use with Electrimatic Compar Charging Lines. Available in $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$ and $\frac{3}{4}$ inch sizes.

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Electrimatic

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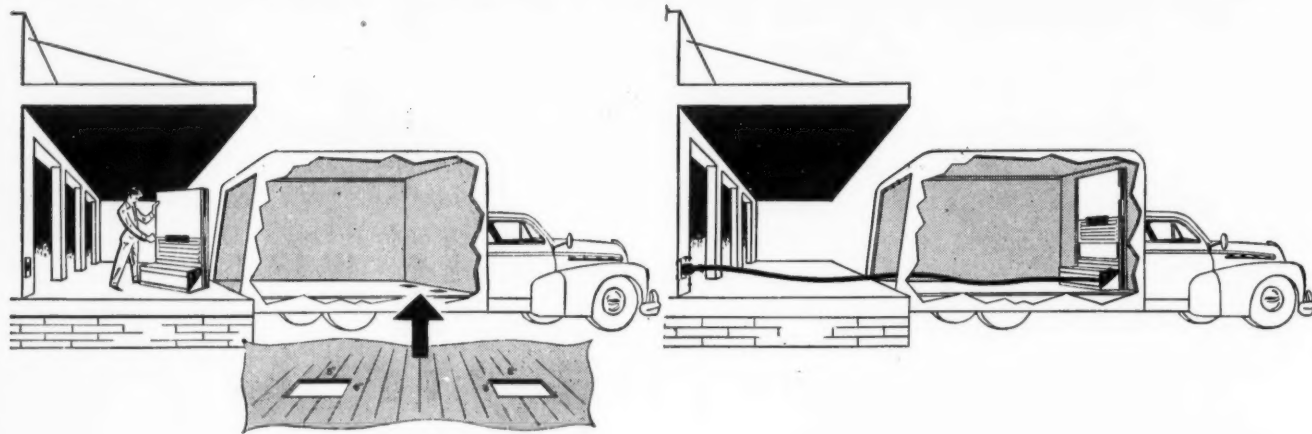
"Detroit" Heating and Refrigeration Controls • Engine Safety Controls • Float Valves and Oil Burner Accessories • "Detroit" Expansion Valves and Refrigeration Accessories • Stationary and Locomotive Lubricators

They'll Do It Every Time By Jimmy Hatlo



Do You Have 'One Foot In the Door'?

Here's NEW CONVENIENCE in Truck Refrigeration



A complete, packaged TRUCK REFRIGERATION UNIT that you can install yourself

The utmost simplicity of the new Kold-Hold Packaged Refrigeration Unit pays dividends for you in lower Truck Refrigeration costs. Just push the Unit into the truck, bolt it in place and it's ready for operation.

The cooling cycle is started by merely plugging-in to any 110 volt electric outlet. Thus, you can build refrigeration in the truck wherever electricity is available. The "Hold-Over" Plates in the unit will maintain the predetermined low temperature of the truck throughout a day's deliveries.

What Is It? A complete assembly of all units necessary to adequately refrigerate an average truck 40° to 50° temperature for a day's run.

How Does It Work? Unit is shipped complete, ready to install. Push into truck, cut holes for air intake and discharge, bolt to floor and plug into electrical outlet.

Is Body Work Required? No. The unit is adjustable to fit most any truck. No "dog house" for compressor, no change of body or expensive installations are required.

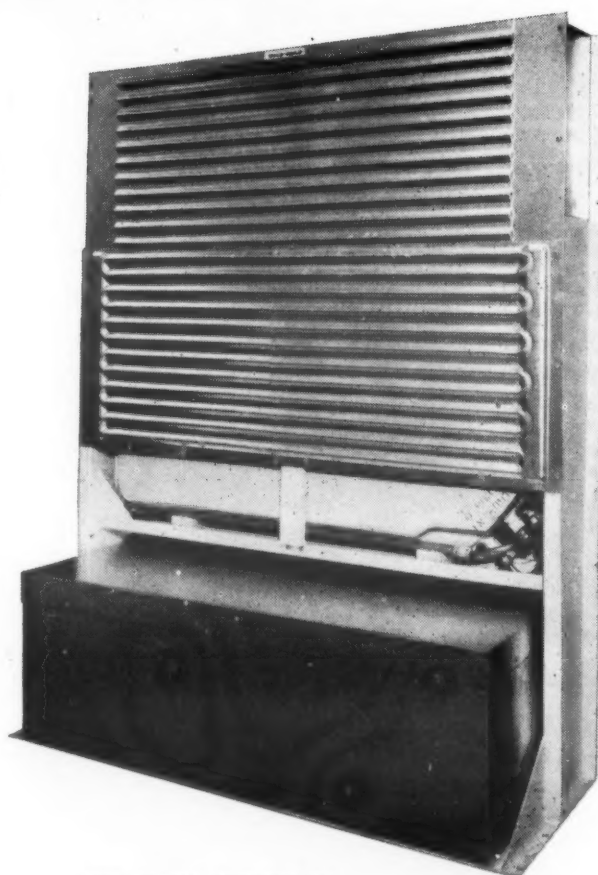
How Long To Freeze Plates? Ample plate refrigeration for extreme weather conditions.

How About Long Runs? Truck Contents are easily protected on runs of 2 days or longer by simply plugging-in at any gas station, garage or overnight stop.

What Is Operating Cost? The 1 hp. compressor has capacity of 42,000 BTU's in 10 hours and operates for a few cents a day. Any refrigeration man can service if ever necessary.

How Does It Compare With Ice? The Kold-Hold Unit provides a more dependable refrigeration at less cost. There is no slime or bother.

Is This New? It is new only in that it is a packaged unit. Kold-Hold Refrigeration Plates have given satisfactory operation for hundreds of users for over 15 years.



New bulletin describes the many advantages of Kold-Hold PACKAGED Truck Refrigeration. Write for your copy today.

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Subscription Rates: U. S. and Possessions, Canada, and all countries in the Pan-American Postal Union: \$5.00 per year; 2 years \$8.00. All other foreign countries: \$7.00 per year. Single copy price, 20 cents. Ten or more copies, 15 cents each; 50 or more copies, 10 cents each. Please send remittance with order.

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VOLUME 53, No. 14, SERIAL No. 994, APRIL 5, 1948

War Talk Should Wake Up Home Freezer Dealers

(Concluded from Page 1)

are some answers to that pertinent question which we have lumped together from recent letters:

(1) He should invest in inventories of practically everything; because during wartime all consumers durable goods are well-nigh unattainable.

(2) He should buy, stockpile, and sell all the home and farm freezers he can obtain before World War III comes. That's a patriotic duty. Here's why:

During the last war makeshift, patched-up, jerry-built home freezers sold for as much as a thousand dollars apiece. Nothing in the entire consumers durable goods field—automobiles, washers, refrigerators, ranges, water heaters, or even irons and alarm clocks—commanded so extravagant a premium.

Sex wasn't rationed, but food was; and of the two basic human needs, food came first. In a war period people work overtime and worry overtime; both drains on the human system call for extra food just when meat and vegetables and fruits are in the shortest supply.

With a freezer on the premises, however, a family could eat well. Vegetables from Victory Gardens could be frozen and stored; so could fish and game and farm-slaughtered beef, veal, pork, and mutton.

No wonder fantastic prices were paid for hastily-converted ice cream cabinets and tacked-together "freezers." During World War II, the low-temperature storage cabinet became the *summa qua non* of prosperity, and of a healthy existence. The man who owned one was the most envied breadwinner in his neighborhood. He fed his family well.

And it will happen again. People have short memories; but the interval between the tentative end of World War II and the frustrated beginning of World War III hysteria has been so brief that home freezer dealers may need only to hint of imminent meat rationing, etc., to make dozens of quick sales of their eminently useful food-storage-hedgers-against-hunger.

Wise appliance dealers will, during the next few months:

(1) Install at least 20 cu. ft. of frozen foods storage capacity in their own homes (some prefer to put in three or four small units rather than one big one, as a hedge against mechanical failures).

(2) Put home freezers into the homes of their sons, sons-in-law, close relatives, and friends.

(3) Call on their best customers—the ones they want to keep—and remind them that another war will re-institute food rationing, backyard gardening, dull diets, etc.

(4) Knock themselves silly to sell freezers to all the appliance prospects on their manifold lists—realizing, all the while, that selling a good freezer to any family will make that family a friend for life.

It should be a cinch to move an enormous volume of home and farm freezers during the next several months.

All the dealer need do is call on all his prospects, friends, and neighbors; remind them how difficult it was to eat well during the last war; and offer them the means of owning a home reservoir of excellent foodstuffs to have and to hold for their own protection.

Whether or not World War III arrives too soon, or ever comes, the possessor of one or two or three freezers will bless the dealer who sold them to him, and he'll be loyal to that dealer till "Death do them part."

Compact Commercial Food Freezing Unit Does 2 Tons Hourly

SAN JOSE, Calif.—Food Machinery Corp. here has developed a new industrial food freezer which can automatically and continuously handle 1½ to 2 tons of packaged food per hour, depending on the commodity run and the refrigerant temperature, the firm reports.

The equipment, which was developed by Food Machinery's central research department, is being tested at the Santa Clara plant of Pict Sweet Foods.

The size of package used in the equipment is 1½ in. thick, 4 in. wide, and with a variable length of from 5¼ to 5½ in. The 5½-in. length can accommodate all standard vegetable cartons with the conventional 10 and 12 ounce net fill weight, it is pointed out. The 5¼-in. length handles 1-lb. fruits in syrup.

Feed and production rate is from 50 to 90 packages per minute. The freezing residence can handle approximately 4,500 packages at once.

Floor space required is approximately 6 ft. by 26 ft., and the overall height is 14 ft. The freezer is designed for operation with ammonia, "Freon-12," or "Freon-22" in the range of from -25° to -50° F.

The freezing technique is based on the principle that it is possible and practical to achieve high heat transfer rates with packages of food in contact with refrigerated surfaces.

Incoming packages come by feed belt from the filling line into the insulated enclosure which encases the freezer. They are then stripped from the feed belt and onto a revolving disc which delivers them into the bottom flights of two feed screws. They then ride upward on the rotating screws into a column of 64 cartons properly spaced for entering a corresponding stack of shelves.

Guide bars steer the columns of cartons into the aluminum freezer shelves where mechanical fingers motivate each carton through the freezer. After completing the circuit, each column of cartons is ejected onto a de-elevating screw from which the cartons are dropped one at a time onto a discharge belt. The packages are then ready for over-wrapping.

New San Diego Firm

SAN DIEGO, Calif. — Southwest Refrigeration, Inc. has been organized in San Diego with a capital of \$100,000. Principals are: Harold W. Jackson and Thomas M. Hamilton, San Diego; L. E. Hickox, Coronado.

MARSH

Pressure Gauges
Dial Thermometers

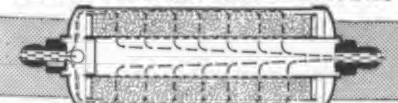
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Recalibrator

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Fur-Clad Northerners Shed Their Coats To Enterprising Miami Storage Firm

CORAL GABLES, Fla.—Fur storage in southern Florida might seem like the proverbial "selling an electric refrigerator to an Eskimo"—but nevertheless, refrigerated fur storage has become an extremely profitable sideline with Marvel Cleaners, Inc., in this exclusive Miami suburb.

Mrs. L. N. Nehrer, whose husband was formerly head of the American Institute of Laundering, opened up the Marvel Cleaners plant in 1941. At that time, she found, there was practically no refrigerated fur storage available in the Miami area.

Tourists who brought their fur coats and heavy wool overcoats along from the north, had to take a chance on these garments molding away in the highly-humid climate. Thousands of Florida girls went away to school in the north during the winter months and brought their fur coats home with them during the in-between season, Mrs. Nehrer learned. Also, the Coral Gables area

abounded with Florida businessmen who made frequent trips north, and thus had to buy winter clothing.

The result was the establishment of a 25 by 18 by 14 ft. fur storage vault, which will accommodate more than 3,000 fur coats. From the Southern Refrigeration Co. she purchased a 1-hp. air conditioning unit which would maintain temperatures between 40 and 50° F. and 50% or less relative humidity. These two points were found best for storage in the corrosive salt air.

Once established, the business showed steady improvement year after year. In December, 1947, the first storage plant was doubled. Another vault of even larger size was built of 8 in. of poured concrete, and insulated with 4 in. of glass-fibre insulating material. A new 2½ ton Bush package air conditioning unit was installed to keep the temperature in the proper range, and dehumidify the air.

School Offers 6 Months Course on Cooling

DETROIT—A booklet describing the advanced course in thermodynamics, refrigeration, air conditioning, heating, and ventilating being offered by the Detroit Air Conditioning Institute here has been prepared by the institute and is available upon request, George H. Clark, director of the institute, has announced.

Enrollments are currently being taken for classes beginning on April 6, June 8, and Sept. 7, Clark said, from men in the industry who have better than average mechanical aptitude and mathematical ability. The course, taught by experienced graduates of midwestern engineering colleges, lasts for six months in day school and 18 months at night.

The booklet answers questions on why the Detroit Air Conditioning Institute was formed, who teaches the course, what is taught, and how it is taught. Copies may be obtained from the institute at 4125 Grand River Ave. here.

VA Invites Bids for Main Hospital Cooling

ALEXANDRIA, Va.—Sealed bids are being sought by the Veterans Administration for the construction of a 250-bed addition to its hospital here, which will include an unannounced amount of refrigeration.

Besides this addition, there will be additions to a number of the hospital's utility buildings, according to J. J. Rockefeller, director of VA's construction service.

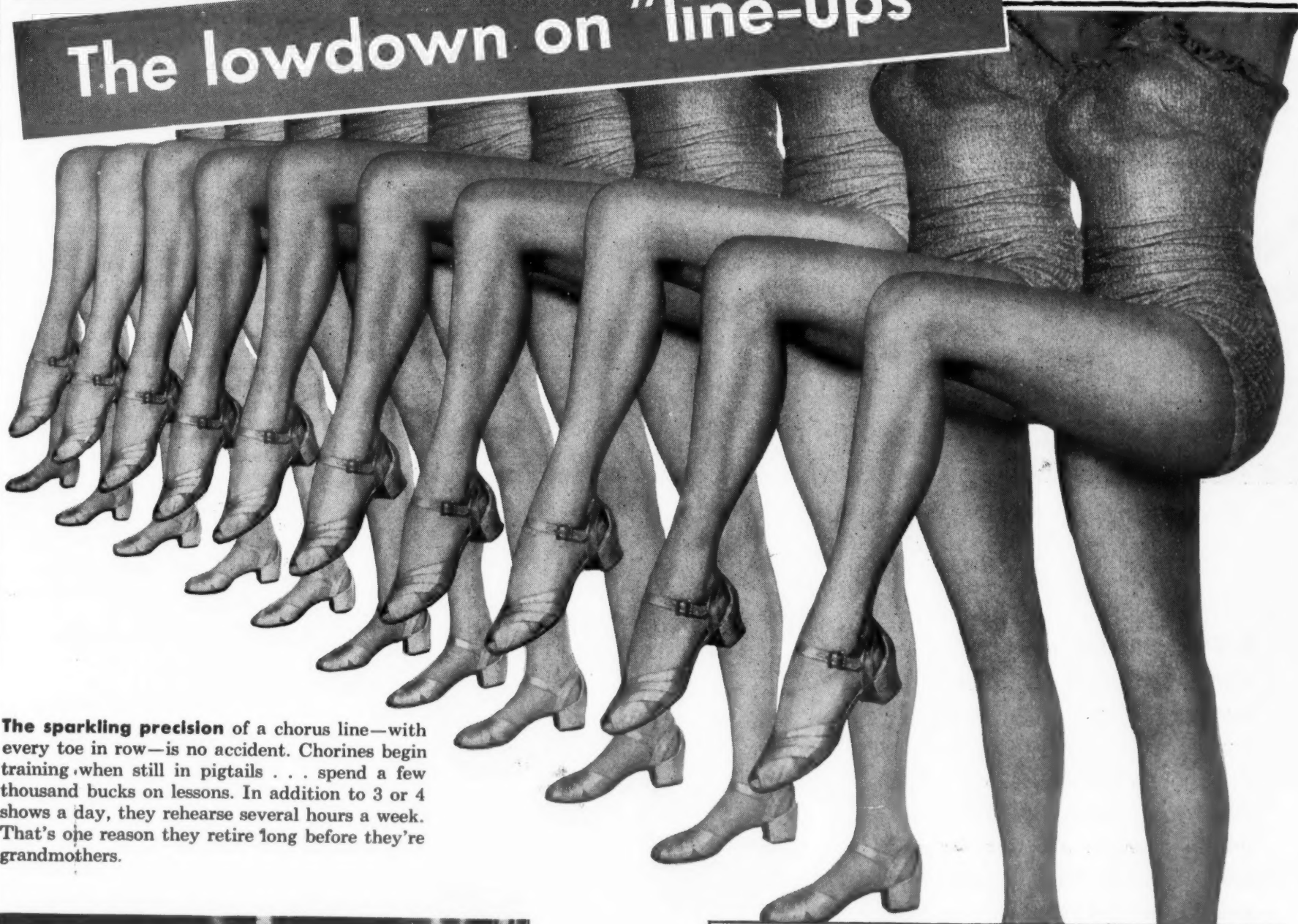
Bidding deadline is 1:30 p.m. May 25, at which time the bids will be opened publicly. Drawings and specifications may be obtained after April 12 by writing to the Construction Service, Veterans Administration, Washington 25, D. C.

Separate bids may be submitted for (1) general construction, (2) electric elevators, and (3) refrigerating equipment, it was announced. Bids must be submitted in triplicate on standard government forms.

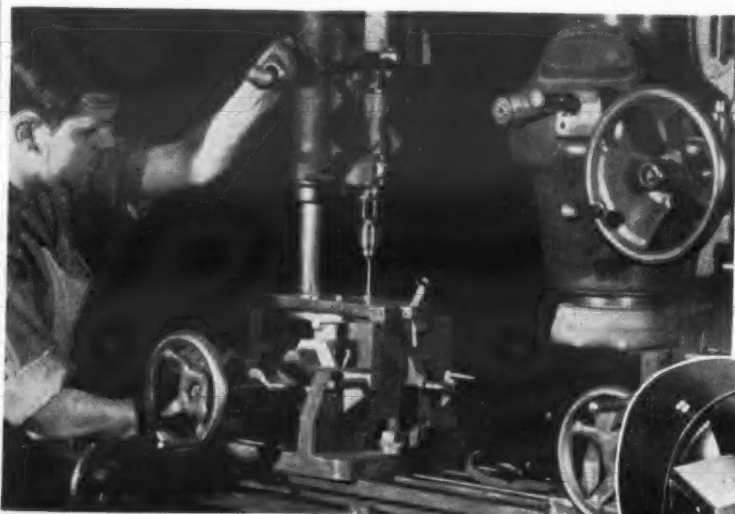
The new hospital addition will consist of four stories and a basement.

Freezing Facts by Super

The lowdown on "line-ups"



The sparkling precision of a chorus line—with every toe in row—is no accident. Chorines begin training when still in pigtails . . . spend a few thousand bucks on lessons. In addition to 3 or 4 shows a day, they rehearse several hours a week. That's one reason they retire long before they're grandmothers.



The flawless performance of Servel Supermetics—with all parts working together in perfect precision—is no accident either. During their manufacture, an ingenious milling and drilling process lines up piston bores, shaft lines, and other parts so that subsequent machining operations can be held within accurate clearance limits.

"Lining up" castings—together with hundreds of other precision operations—contributes to the longer life, dependable service and low maintenance cost of Servel Supermetic condensing units. These units are made in all types and sizes for every application. Send for free copy of "Servel Supermetic." Address Servel, Inc., Division ER, Evansville 20, Indiana.

Servel's new "Supermetic" condensing units will serve dealers and fixture manufacturers in every vital field:

- | | | |
|-------------------|---------------------------|-----------------------|
| 1. Store Fixtures | 4. Beverage Coolers | 7. Farm Freezers |
| 2. Milk Coolers | 5. Vending Machines | 8. Water Coolers |
| 3. Home Lockers | 6. Room Coolers | 9. Industrial Cooling |
| | 10. Vehicle Refrigeration | |

Servel

SUPERMETIC

Table 1—Circular Equivalents of Rectangular Ducts for Equal Friction

Side Rectangular Duct	8	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	Round Ducts																			
5	4.3	4.9	5.5																	
6	4.6	5.4	6.3	6.7																
7	4.9	5.8	6.5	7.1	7.7															
8	5.2	6.1	6.9	7.6	8.2	8.8														
9	5.5	6.5	7.3	8.0	8.7	9.3	9.9													
10	5.8	6.8	7.7	8.4	9.2	9.8	10.4	11.0												
11	6.0	7.1	8.0	8.8	9.6	10.2	10.9	11.5	12.1											
12	6.3	7.4	8.3	9.2	10.0	10.7	11.4	12.0	12.6	13.2										
13	6.5	7.7	8.7	9.6	10.4	11.1	11.8	12.5	13.1	13.7	14.3									
14	6.7	7.9	8.9	9.9	10.8	11.5	12.3	12.9	13.6	14.3	14.9	15.4								
15	6.9	8.2	9.2	10.2	11.1	11.9	12.7	13.4	14.1	14.7	15.3	16.0	16.5							
16	7.1	8.4	9.5	10.5	11.4	12.3	13.1	13.8	14.5	15.2	15.8	16.5	17.1	17.6						
17		8.6	9.8	10.8	11.8	12.6	13.5	14.2	15.0	15.7	16.3	17.0	17.6	18.2	18.7					
18		8.9	10.0	11.1	12.1	13.0	13.8	14.6	15.4	16.1	16.8	17.4	18.1	18.7	19.2	19.8				
19		9.1	10.3	11.4	12.4	13.3	14.2	15.0	15.8	16.5	17.2	17.9	18.6	19.2	19.8	20.4	20.9			
20		9.3	10.5	11.6	12.7	13.6	14.5	15.4	16.2	17.0	17.6	18.4	19.0	19.7	20.3	20.9	21.5	22.0		
22		9.7	11.0	12.1	13.2	14.2	15.2	16.1	16.9	17.8	18.5	19.2	19.9	20.6	21.3	21.9	22.5	23.1	23.6	24.2
24		10.0	11.4	12.6	13.8	14.8	15.8	16.8	17.6	18.5	19.3	20.0	20.8	21.5	22.2	22.8	23.5	24.0	24.7	25.2
26		10.4	11.8	13.1	14.3	15.4	16.4	17.3	18.3	19.2	20.0	20.8	21.6	22.3	23.0	23.8	24.4	25.1	25.7	26.3
28		10.8	12.2	13.5	14.8	15.9	17.0	18.0	19.0	19.8	20.7	21.5	22.4	23.1	23.9	24.6	25.3	26.0	26.6	27.3
30			12.6	13.9	15.2	16.4	17.5	18.5	19.5	20.5	21.4	22.2	23.1	23.9	24.7	25.4	26.2	26.8	27.5	28.2
32			12.9	14.3	15.6	16.9	18.0	19.1	20.1	21.1	22.0	22.9	23.8	24.6	25.4	26.2	27.0	27.7	28.4	29.1
34			13.2	14.7	16.1	17.3	18.5	19.6	20.7	21.6	22.6	23.5	24.4	25.3	26.2	26.9	27.7	28.5	29.2	30.0
36			13.6	15.1	16.4	17.7	19.0	20.1	21.2	22.2	23.2	24.2	25.1	26.0	26.8	27.7	28.5	29.3	30.0	30.8
38			13.9	15.4	16.8	18.2	19.4	20.6	21.7	22.8	23.8	24.8	25.8	26.7	27.5	28.4	29.2	30.0	30.8	31.5
40			14.3	15.7	17.2	18.6	19.8	21.1	22.2	23.3	24.4	25.4	26.4	27.3	28.2	29.1	29.9	30.8	31.6	32.4
42				16.1	17.6	19.0	20.3	21.6	22.7	23.8	24.9	25.9	26.9	27.9	28.8	29.8	30.7	31.4	32.2	33.0
44				16.4	18.0	19.4	20.7	22.0	23.1	24.3	25.4	26.5	27.5	28.5	29.5	30.3	31.2	32.1	32.9	33.7
46				16.7	18.4	19.8	21.1	22.4	23.6	24.8	25.9	27.0	28.1	29.1	30.1	31.0	31.9	32.8	33.8	34.6
48				17.0	18.7	20.1	21.5	22.8	24.1	25.2	26.4	27.5	28.6	29.6	30.5	31.6	32.5	33.4	34.3	35.2
50					19.0	20.4	21.9	23.2	24.5	25.7	26.9	28.0	29.2	30.3	31.3	32.2	33.1	34.1	35.0	35.9
52					19.2	20.8	22.2	23.6	24.9	26.2	27.4	28.5	29.6	30.7	31.8	32.9	33.8	34.7	35.6	36.5
54					19.6	21.1	22.6	24.0	25.3	26.6	27.8	29.0	30.1	31.2	32.3	33.4	34.4	35.3	36.3	37.2
56					19.9	21.5	22.9	24.4	25.7	27.0	28.3	29.5	30.6	31.7	32.8	33.9	34.9	35.9	36.9	37.8
58						21.8	23.3	24.7	26.1	27.4	28.7	30.0	31.1	32.2	33.3	34.4	35.4	36.4	37.4	38.4
60						22.1	23.6	25.1	26.5	27.8	29.1	30.5	31.6	32.7	33.8	34.9	36.1	37.1	38.1	39.1
62						22.4	24.0	25.5	26.9	28.2	29.5	30.9	32.1	33.2	34.3	35.4	36.6	37.7	38.7	39.6
64						22.7	24.3	25.9	27.3	28.6	29.9	31.3	32.6	33.7	34.8	35.9	37.1	38.2	39.2	40.2
66						23.0	24.6	26.2	27.7	29.0	30.3	31.7	33.0	34.2	35.3	36.4	37.6	38.7	39.8	40.8

From Heating, Ventilating, Air Conditioning Guide 1947.



NIBCO

WROT FITTINGS



● Made from the same seamless tubes with which they are used, NIBCO fittings match perfectly in copper tube installations. They are formed—without seam or weld—in precision dies by patented NIBCO processes. That's the secret of greater strength, smoother design and easier assembly. Your customers will be proud of finished jobs made with NIBCO fittings and you'll be pleased with the better profit that goes with their speed of installation. The NIBCO line includes fittings, valves, adapters—everything you need to go with the tube.

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Sheet Metal Ducts (Cont.)

EQUAL FRICTION METHOD FOR SIZING DUCTS

In laying out various types of larger duct systems consisting of many outlets and branches, many variables are encountered which must be considered. While definite rules cannot be applied to all cases, the next best thing would be to apply a general procedure to all cases in sizing ducts and to arrive at average values of duct frictions.

This system bases the flow of air and friction on round ducts. If rectangular ducts are to be used in the construction, it becomes necessary then to change the size of the round duct to its equivalent size in rectangular duct which will carry the same volume of air at the same friction.

This results in lower velocities in the square or rectangular ducts than that in the equivalent round pipe to obtain equal capacities and at the same time have equal friction.

In order to design this type of a duct system Fig. 6 and Table 1 are used.

Fig. 6 represents the friction or resistance chart. It is made up as follows:

a. Resistance pressure in inches water gauge per 100-ft. duct length, at bottom, with vertical lines running from bottom to top of chart.

b. Volume in cubic feet per minute (c.f.m.) at the left side, with horizontal lines running from left to right of chart.

c. Velocities in feet per minute (f.p.m.), diagonal lines running from upper left to lower right of chart.

d. Diameters of round ducts in inches, diagonal lines running from lower left to upper right of Chart.

Having information from any two of the above, a person can obtain the other two from the chart.

Table 1, known as Circular Equivalents of Rectangular Ducts for Equal Friction, is made up with dimensions of the rectangular ducts at side and top and the round duct diameter at the intersection of these two.

EXAMPLE NO. 1

Given: 1,750 c.f.m. at .06 resistance pressure per 100 ft. of duct what is, (a) velocity, (b) diameter of round duct?

a. (See Fig. 6.) Find intersection of 1,750 c.f.m. horizontal line and .06 vertical friction line and read on diagonal velocity line 900 f.p.m. Velocity is therefore 900 f.p.m.

b. (See Fig. 6.) The point of intersection of 1,750 c.f.m. and .06 resistance line also falls between the 18 in. and 20 in. diameter duct. This point is close to the center of the two, so that in this case it is a 19 in. diameter duct. Therefore the size of the round duct is 19 in. in diameter.

EXAMPLE NO. 2

In Example No. 1, .06 is the friction loss per 100 ft. of duct. What is the friction loss for (a) 10 ft., (b) 20 ft., (c) 30 ft., (d) 50 ft., (e) 80 ft.?

- 10 ft. $\frac{10}{100} \times .06 = .006$ in. of water gauge.
- 20 ft. $\frac{20}{100} \times .06 = .012$ in. of water gauge.
- 30 ft. $\frac{30}{100} \times .06 = .018$ in. of water gauge.
- 50 ft. $\frac{50}{100} \times .06 = .030$ in. of water gauge.
- 80 ft. $\frac{80}{100} \times .06 = .048$ in. of water gauge.

EXAMPLE NO. 3

In Example No. 1 it was found that the diameter of the round duct is 19 in. What is the equivalent size of rectangular duct having the same friction? (See Table 1.)

Assume one side of duct (height-inches)	The other side (width-inches)	Size of rectangular duct (inches)
17	18	18 x 17
16	19	19 x 16
15	20	20 x 15
14	22	22 x 14
13	24	24 x 13
12	26	26 x 12
11	29	29 x 11
10	33	33 x 10
9	38	38 x 9
8	45	45 x 8

Any one of the sizes as selected from 18 in. x 17 in. to 45 in. x 8 in. can be used. This is entirely dependent upon the building structure and space allotted for the duct.

Fig. 6—Duct Friction or Resistance Chart

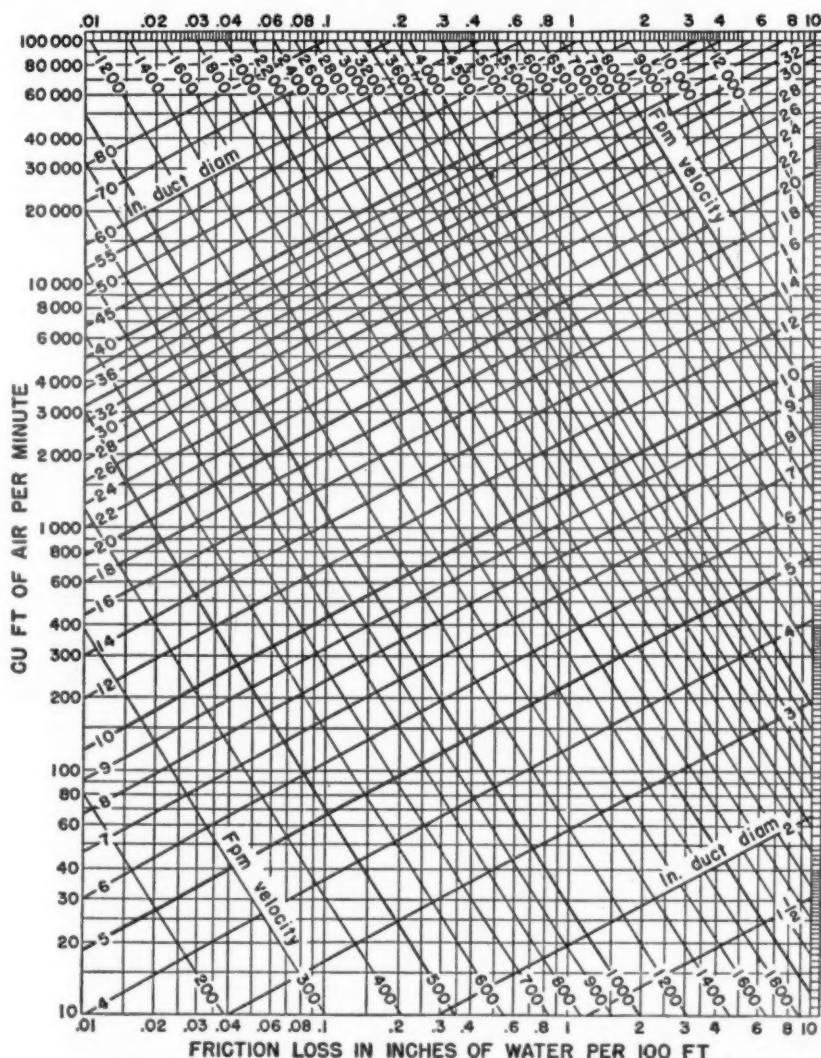


Fig. 6—As explained in the accompanying text, this duct friction chart is used in determining the c.f.m., f.p.m., resistance pressure, and sizes of round ducts. If two factors are known, the others can be found from the chart.

TELLING and SELLING

A GUIDE TO SMART ADVERTISING AND
MERCHANDISING PRACTICES

This series of articles comprising ideas and principles for the small retail or manufacturing business is written by James D. Woolf, who was for more than 20 years a vice president and director of J. Walter Thompson Co., one of the largest advertising agencies. Out of his experience embracing all types of advertising and merchandising he brings his counsel to the small businessman who must plan his own advertising and promotional efforts.

By James D. Woolf

Copy Must Ring True

The Committee on Consumer Relations in Advertising, Inc., sponsored by advertising agencies, publishers and radio networks, some time ago interviewed 2,000 consumers on what they thought of advertising.

Most of those questioned thought ads too emotional and not factual enough.

Only 12% thought that the wisest way to buy was to ask for a well-advertised brand. Most asserted they had more confidence in the personal word of the retailer. However, they felt that often the dealers know far too little about the merchandise they sell.

I believe the 12% figure is far too low. Yet something is wrong. There is a reason for so much mistrust. And I think that reason is the fact that so much advertising does not have the ring of truth.

THE SECRET OF CONVICTION

Advertising to be believable must come within the scope of the reader's



experience. It ceases to be convincing the moment it steps outside the realities of the reader's life.

I have before me the advertisement of a woman's foot comfort shoe that seems to me to be a case in point. The copy is a human interest story of the unhappy relations between a man and his wife, an unfortunate victim of foot discomfort. The couple positively hated each other until she discovered—the advertised shoe!

Now everything is just ducky. Shod in her new footwear, she and

hubby are planning another honeymoon.

I believe this appeal will impress readers as being forced and unreal. Surely there must be a great many human interest incidents that would come within the experience of foot sufferers—true-to-life incidents that would touch a responsive chord.

IS IT TRUE TO LIFE?

Then there is the woman who had no time to go to the movies and enjoy life generally. She slaved in her kitchen while her husband had a good time—and all because she did not possess the kitchenware that is described in the advertisement!

One can understand how such labor-saving devices as kitchen cabinets, washing machines, and vacuum cleaners add much to the happiness of woman, but it is hard to understand how the lack of a few pots and pans could raise so much holy Ned.

I have before me a furniture polish advertisement bearing this headline: "To the mother who is thinking of a husband for her daughter." The copy tells of the daughter whose acquaintance with young men is limited to a casual "How do you do?" It worries the mother that other girls, no prettier, have their callers and their dates. What can the trouble be?

"More often than mothers think," declares the copy, "the appearance of the home interior is the real answer. And yet things could easily be so different." All that is needed to get daughter a husband is just a little of the advertised polish, industriously applied.

Another advertiser tells us that his pure wool blankets will be "chief among her treasures—when dreams come true." I wonder if this won't impress women as being rather forced? They do want good blankets, of course, but I hardly think that this utilitarian product has a place in their dreams.

SHUN EXAGGERATION

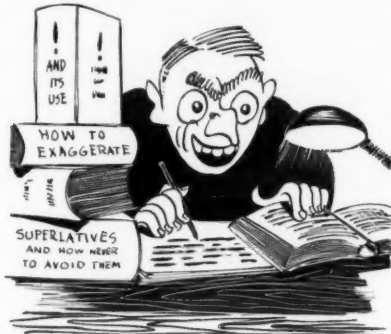
The woman with thin, straggly, lifeless hair will surely have difficulty believing this: "No matter what kind of hair you have, you can make it

the envy of other women. The result of this treatment is astounding! Your hair is made over—a thick, heavy, gleaming mass, sparkling, soft, fresh and luxuriant."

A remarkable hair tonic indeed! But it promises too much; the results it offers are not consistent with the ordinary experience of women.

Where is the motorist who has ever had this experience? "To ride in this new eight is to glide along so smoothly that one does not realize the car is in motion! There is not the slightest jar, the smallest tremor—the road seems made of silken plush." The car referred to here undoubtedly rides easily, but the copy claims too much; it taxes the credulity of the reader.

The temptation to exaggerate, to use superlatives, is a great one to



most copy writers, so anxious are they to present their wares in the strongest possible way. The best rule is avoid the use of superlatives altogether.

FOR OUR SELFISH GOOD

The percentage of advertising that is dishonest to the point of breaking the law is, I think, very small. The Federal Trade Commission, the Bet-

ter Business Bureaus, and such other vigilantes take care of offenders like these.

What so often is objectionable—why so many consumers seem to take such a dim view of advertising—is exaggeration.

In an address before the Chicago Federated Advertising Club, Fairfax M. Cone, well-known advertising agency executive, said this:

"It should be the very selfish aim of every one of us to see that our advertising tells the truth. . . . A single exaggerated claim in a newspaper or magazine ad or over the air contaminates every other advertisement to which the reader is subjected—for days or maybe weeks or months."

GIVE THEM FACTS

I want to say again what has been said here before: *good advertising is, first of all, INFORMATION.* When we buy an article of merchandise, we want to know what it is made of, what it will do and how it works, what its special qualities are, etc.

Two of the best textbooks on advertising I know anything about are the Sears and Wards catalogs. Without exaggeration, without emotion, without fancy writing, they tell the consumer in simple, honest words why their merchandise is worth the prices they ask for it. Millions and millions of dollars in mail order business has proven that *facts sell goods.*

It is well for merchants to note that most of the 2,000 consumers interviewed believed that often retailers do not know enough about the merchandise they sell. Study your merchandise thoroughly before you write your advertising. That's salesense.

Josey Named Eastern Div. Sales Agent for Safe-Way

CHICAGO—Safe-Way Food Locker Co. has announced the appointment of Jesse E. Josey as its eastern divisional sales representative.



Jesse E. Josey

Josey has been prominent in the frozen food locker field since 1942, and was formerly national sales representative for a major manufacturer of refrigerated locker equipment.

He will cover Safe-Way's eastern territory from Maine to and including South Carolina and west into Ohio and Kentucky.

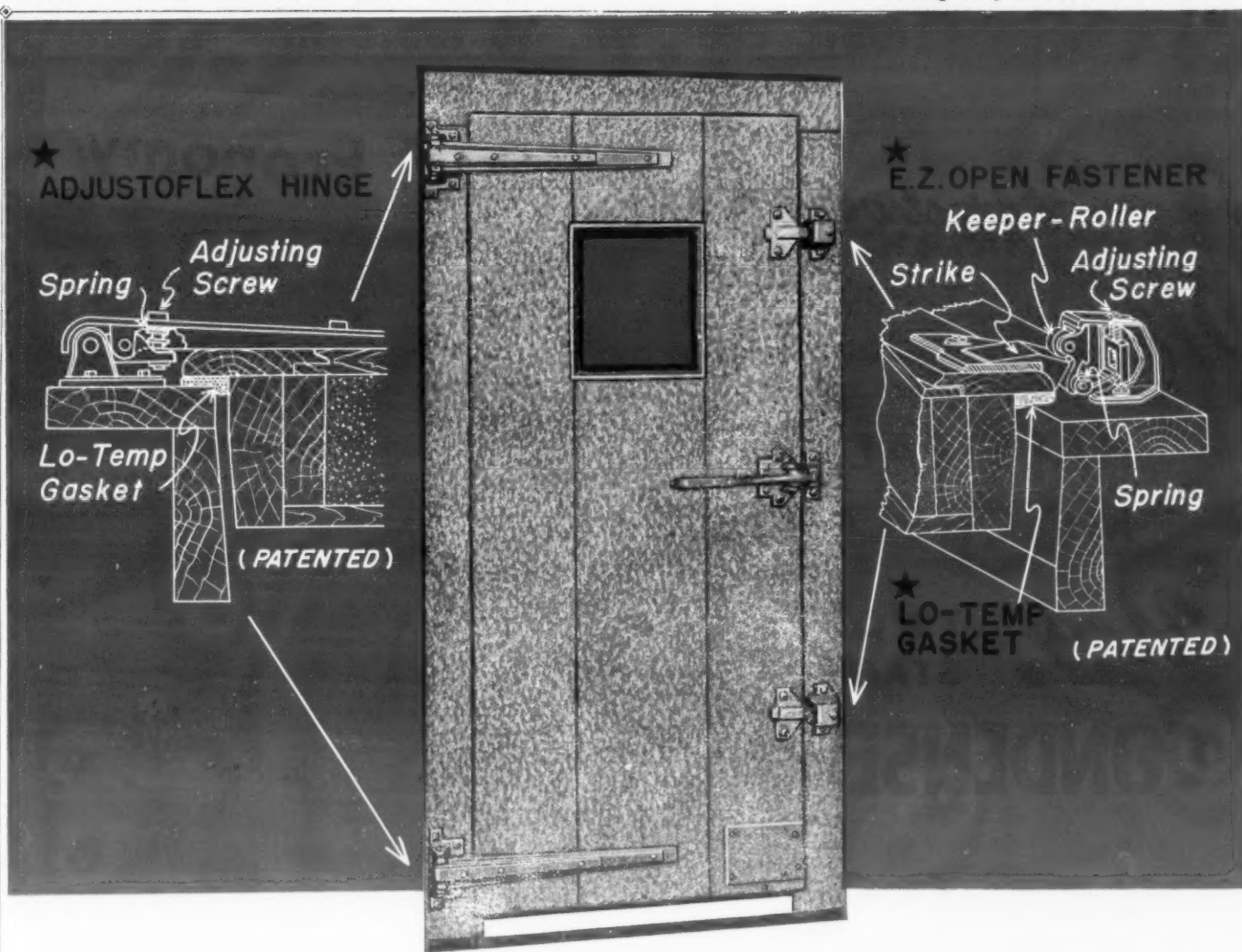
Distributor Plans New Building

HOUSTON, Tex.—Deer & Nash, Inc., commercial refrigeration and air conditioning distributor here, will start construction in the near future on a \$40,000 building to be located here.

The one-story masonry structure will contain offices, display rooms, and warehouse space.

Food Store Goes Self-Service

SYRACUSE, N. Y.—The P & C Market at 2706 S. Salina St. is the first food store in Syracuse to install a Frez-O-Mat Frozen Foods Display which makes its frozen foods department completely self-service.



Three Exclusive Reasons for the Uniformly Tight Seal of JAMISON LO-TEMP Doors

The "LO-TEMP" DOOR—an infitting door for sub-freezing use is an outstanding addition to a distinguished line. Front, edges and casing being metal clad, possible deterioration caused by moisture precipitation eliminated and sanitary appearance maintained. Equipped with, "Adjustoflex" Hinges, "E-Z Open", Two-Point Fastener, "Lo-Temp" Gasket, exceptionally efficient performance is assured.

ADJUSTOFLEX HINGE . . . (See Sketch) combines self-adjustment with spring tension regulation. Spring pressure automatically seats door gasket. A simple turn of adjusting screw alters spring pressure to compensate for gasket wear.

E-Z OPEN, TWO-POINT FASTENER . . . (See Sketch) is the only two-point fastener incorporating two much-desired features, minimum effort to open and close and maintenance of positive, uniform gasket pressure. An effortless push on either front or back handle opens door, another push closes it, made possible by Jamison's exclusive design of strike and keeper, and external, easily accessible spring adjustment.

There being no connection through the door between front and back handles, icing-up of either is eliminated. Both handles are short in length and do not interfere with passage through doorway.

LO-TEMP GASKET . . . (See Sketch) consists of a sponge rubber core covered with moisture impervious rubber skin. Applied to full overlap of door, when door is closed gasket not only seals against door casing but *plug-seals* space between edges of door and casing. The "Lo-Temp" Gasket is manufactured exclusively for us to our specifications.

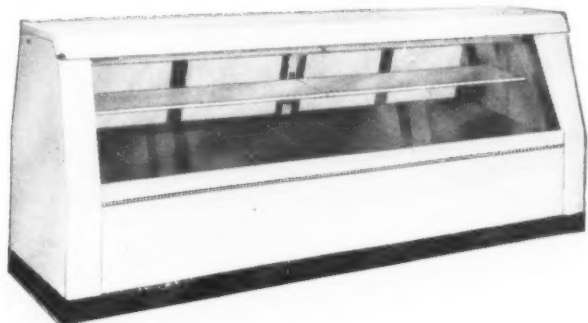
Write for catalog or get in touch with our nearest branch. You will be surprised how frequently Jamison standard products meet all your requirements. If our standard products do not satisfy your needs we are equipped to build doors, regardless of size, character or duty, to your specifications. Jamison Cold Storage Door Co., 118 Maple Avenue, Hagerstown, Maryland.

JAMISON

COLD STORAGE DOORS

The Oldest and Largest Builders of Cold Storage Doors in the World

we've **HIT**
our stride! . . .

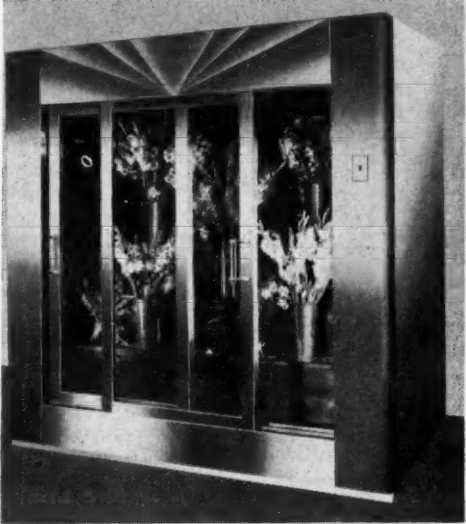


• We're pleased to announce that we're all caught up with production. We can now make prompt shipment of regular double-duty refrigerated cases and 5'6" and 8' wall refrigerator storage and display cases. Like to know more about our dealer and distributor availabilities? Write for information.

GOLDSMAN

Manufacturers of Commercial Refrigerators
1325 N. LAWRENCE STREET • PHILADELPHIA 22, PA.

BLACK BEAUTY FLORIST BOX...



Permanent gleaming Polished Stainless Steel Front and ends. Lustrous Black Porcelain interior with genuine non-sweat patented "Thermopane" doors sliding on roller bearings. Fluorescent lighting. Overhead Coil. A combination that can't be beat! Especially put together with that "Frigitemp" touch.

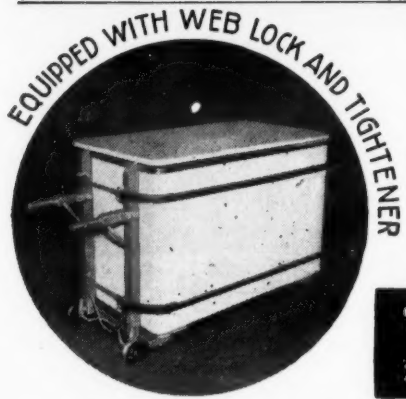
Model FL-6
6' Long 4' Deep 8' High
Model FL-8
8' Long 4' Deep 8' High
Model FL-9
9' Long 4' Deep 8' High

ALSO AVAILABLE
Beautiful 4 ft. All Vision Orchid Case. It really sells orchids and other specialties!

DEALERS ONLY. Inquire about interesting

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Brooklyn 16, N. Y.
Main 2-9093



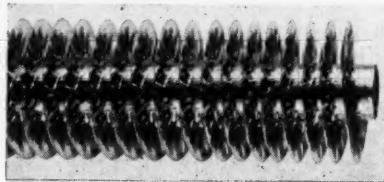
Are You Looking for An Easy Way to Handle Stoves, Refrigerators and Freezers?

Solve Your Problem with the New **ROLL-OR-KARI Dual Trucks**

Patented Step-On-Lift • Folding Handles
Capacity 1000 Lbs. • Shipping Weight 40 Lbs.
WRITE TODAY

THE ROLL-OR-KARI CO.
MANUFACTURERS
ZUMBROTA • MINNESOTA

Constant Spring Tension Clamps Fins to Tubing



PHILADELPHIA — Production is now under way on a new type of finned tubing which is being introduced by the Merchant & Evans Co. This will be sold directly to manufacturers and to the trade through parts and supplies wholesalers.

Copper or aluminum fins are wound spiral-fashion around 1/2-in. o.d. copper tubing, which is available in long or short length. Fin spacing on the tube can be made from three to seven per inch with either 1 1/2 in. or 1 3/4 in. o.d. of the fins themselves.

No tinning of the fins to tube is necessary, the fins maintaining a constant spring tension against the tube to assure efficient thermal contact, it is claimed.

Surface area available for heat transfer is given by the manufacturer as follows: with 1 1/2 in. o.d. fins, surface area per lineal foot with seven fins per inch is 1.538 sq. ft.; with six fins per inch, 1.342 sq. ft.; with five fins, 1.139 sq. ft.; with four fins, .949 sq. ft.; with three fins per inch, .746 sq. ft.

With the 1 3/4 in. o.d. fin size, the surface area in square feet per lineal foot for fin spacings of six, five, four,

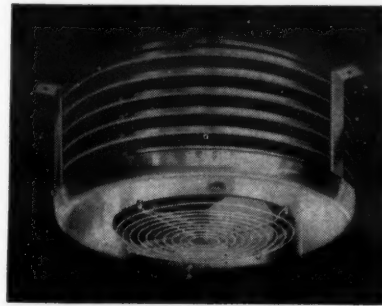
and three per inch is: 1.780, 1.486, 1.191, and .900, respectively.

The new finned tubing, claims the manufacturer, is adaptable for use in many industries, particularly in the manufacture of steam coils, heat exchangers, heat reclaimers, condensers, and other heat transfer devices.

Peerless 1948 Dome Units Keep Humidities High.

CHICAGO—The new 1948 line of improved Peerless dome coolers for use in reach-in and walk-in refrigerators where high humidities must be maintained was introduced recently by Peerless of America, Inc. here.

This line, according to the company, is successor to the 20,000 dome



coolers used to cool food in all U. S. army cantonments during World War II.

In the dome cooler, the company explained, air from the refrigerator is drawn up in the center of the unit and discharged horizontally along the fixture ceiling to drop down the side walls. It has a built-in heat exchanger and suction spinner.

The 1948 line consists of nine models, circular in shape, that emit air in all directions. The three smallest sizes in the line are also made in a two-way type that limits the air flow to two directions.

These three, models nos. 67, 97, and 127, are all equipped with 1/400 hp. motors with a capacity of 1,550 r.p.m. They all measure 4 1/2 in. in height but are 18, 20, and 22 in. in diameter respectively. At a temperature differential of 20° between air and refrigerant, they have B.t.u. per hr. capacities of 1,300, 1,900, and 2,500 respectively. The two smallest models have 8-in. fans, while the model 127 has a 10-in. fan.

The next four larger size models,

the 227, 327, 457, and 607, all are equipped with 1/200-hp. motors at 1,000 r.p.m. They all are 8 in. in height but their diameters are 27, 27, 31, and 34 in. respectively.

Models 227 and 327 have 12-in. fans, while the two larger models have 16-in. fans. At the 20° temperature differential mentioned above, their respective B.t.u. per hr. capacities are 4,500, 6,500, 9,000, and 12,000.

The two largest units in the line, the models 907 and 1257, have B.t.u. per hr. capacities of 18,000 and 25,000 respectively. They both are equipped with 1/2-hp. motors at 1,140 r.p.m., and 20-in. fans. They have a height of 13 1/2 in. Their diameters are 43 and 46 in. respectively.

All models can use "Freon," methyl chloride, sulphur dioxide, or ammonia, according to the company.

Temprite Introduces Bottled Water Cooler

DETROIT — A new bottled-water cooler intended for cup service in any location where water consumption is

light or wherein plumbing facilities are not available, is a recent addition to a line of drinking water coolers now being manufactured by Temprite Products Corp.

Capacity is 3 gallons per hour cooled to 50° drinking water temperature in 90° room temperature.

Cabinet is finished in an attractive baked metal-base enamel.

This cooler is obtainable with either hermetic or open-type condensing units to meet special or unusual application demands. Cooler and storage tank are constructed of 18-8 stainless steel and copper refrigeration coils are hot-metal bonded to the stainless steel water storage tank.

All models meet the requirements of the Bureau of Standards of the U. S. Department of Commerce. Dimensions are 16 1/4 in. square by 42 in. high, without bottle, according to the company.



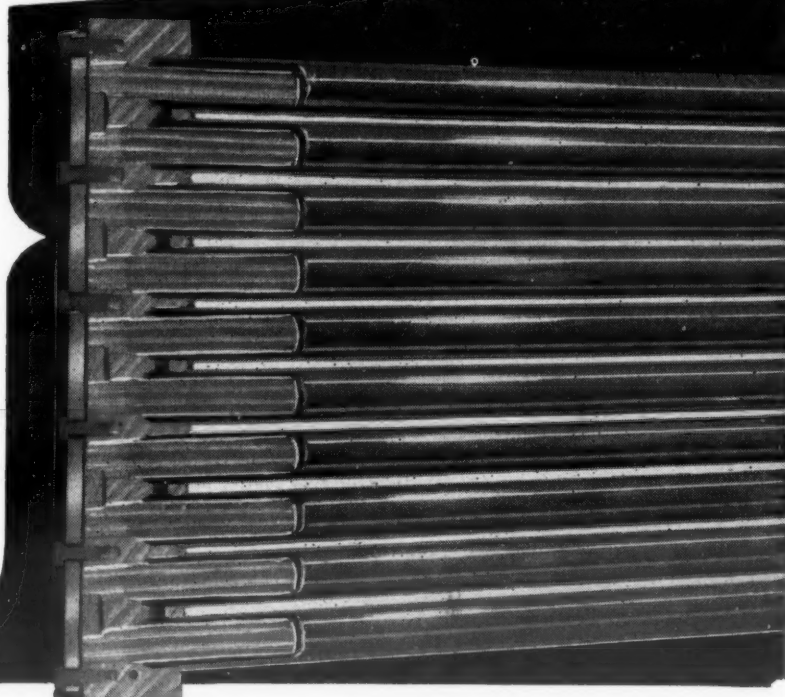
DOUBLE-TUBE COUNTER-FLOW CLEANABLE WATER-COOLED CONDENSERS

Objective: Operational Economy

Answer:

HALSTEAD & MITCHELL'S

New TWO-STAGE CONDENSERS



One of the surest ways to obtain economical condenser operation is to get the maximum heat-transfer capacity by taking the most heat from the refrigerant in the shortest period of time.

Halstead & Mitchell's New Two-Stage Condenser design makes possible greater concentration of copper water-tube surfaces in the lower portion of the condenser. The smaller top water tubes allow ample refrigerant space, thereby eliminating resistance or pressure drop and affording the lowest possible head pressures.

The new Two-Stage design improves refrigerant velocity and increases heat-transfer efficiency. Thus, with this construction, greater heat-transfer values are affected.

HM Condensers available from 1/2 to 10 H. P.
from wholesalers in principal cities.



Halstead & Mitchell

HM Cleanable Condensers can be maintained at "new-unit" efficiency and economy by regular and continued use of a standard cleaning tool. Water tubes are accessible at both ends—just loosen a few bolts and slide the end plates off—and there is nothing to obstruct the simple cleaning operation. The cleaning tool HAS to clean! Each quick cleaning operation takes only minutes, yet adds months and years of the most efficient and economical service to the life of the condenser.

Wholesalers in principal cities Write for descriptive literature.

OFFICES: Bessemer Building, Pittsburgh 22, Pa.

What's New

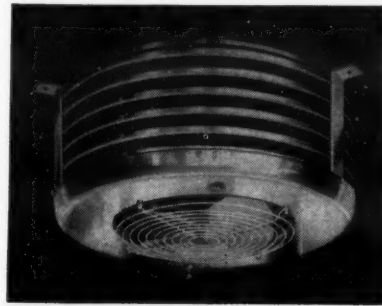
and three per inch is: 1.780, 1.486, 1.191, and .900, respectively.

The new finned tubing, claims the manufacturer, is adaptable for use in many industries, particularly in the manufacture of steam coils, heat exchangers, heat reclaimers, condensers, and other heat transfer devices.

Peerless 1948 Dome Units Keep Humidities High.

CHICAGO—The new 1948 line of improved Peerless dome coolers for use in reach-in and walk-in refrigerators where high humidities must be maintained was introduced recently by Peerless of America, Inc. here.

This line, according to the company, is successor to the 20,000 dome



coolers used to cool food in all U. S. army cantonments during World War II.

In the dome cooler, the company explained, air from the refrigerator is drawn up in the center of the unit and discharged horizontally along the fixture ceiling to drop down the side walls. It has a built-in heat exchanger and suction spinner.

The 1948 line consists of nine models, circular in shape, that emit air in all directions. The three smallest sizes in the line are also made in a two-way type that limits the air flow to two directions.

These three, models nos. 67, 97, and 127, are all equipped with 1/400 hp. motors with a capacity of 1,550 r.p.m. They all measure 4 1/2 in. in height but are 18, 20, and 22 in. in diameter respectively. At a temperature differential of 20° between air and refrigerant, they have B.t.u. per hr. capacities of 1,300, 1,900, and 2,500 respectively. The two smallest models have 8-in. fans, while the model 127 has a 10-in. fan.

The next four larger size models,

the 227, 327, 457, and 607, all are equipped with 1/200-hp. motors at 1,000 r.p.m. They all are 8 in. in height but their diameters are 27, 27, 31, and 34 in. respectively.

Models 227 and 327 have 12-in. fans, while the two larger models have 16-in. fans. At the 20° temperature differential mentioned above, their respective B.t.u. per hr. capacities are 4,500, 6,500, 9,000, and 12,000.

The two largest units in the line, the models 907 and 1257, have B.t.u. per hr. capacities of 18,000 and 25,000 respectively. They both are equipped with 1/2-hp. motors at 1,140 r.p.m., and 20-in. fans. They have a height of 13 1/2 in. Their diameters are 43 and 46 in. respectively.

All models can use "Freon," methyl chloride, sulphur dioxide, or ammonia, according to the company.

Temprite Introduces Bottled Water Cooler

DETROIT — A new bottled-water cooler intended for cup service in any location where water consumption is

light or wherein plumbing facilities are not available, is a recent addition to a line of drinking water coolers now being manufactured by Temprite Products Corp.

Capacity is 3 gallons per hour cooled to 50° drinking water temperature in 90° room temperature.

Cabinet is finished in an attractive baked metal-base enamel.

This cooler is obtainable with either hermetic or open-type condensing units to meet special or unusual application demands. Cooler and storage tank are constructed of 18-8 stainless steel and copper refrigeration coils are hot-metal bonded to the stainless steel water storage tank.

All models meet the requirements of the Bureau of Standards of the U. S. Department of Commerce. Dimensions are 16 1/4 in. square by 42 in. high, without bottle, according to the company.



Ful-Vision DISPLAY CASE

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both self contained and remote
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What's New (Con't)



Jordon Model Combines Low, Normal Temperatures

PHILADELPHIA—A new domestic refrigerator that combines 10 cu. ft. of normal temperature storage space with 4 cu. ft. of frozen storage space has been introduced by the Jordon Refrigerator Co. here.

Called the model 10/4, it is said to occupy only a slightly larger space than the average household refrigerator. It measures 68 in. high, 39 in. wide, and 29 in. deep.

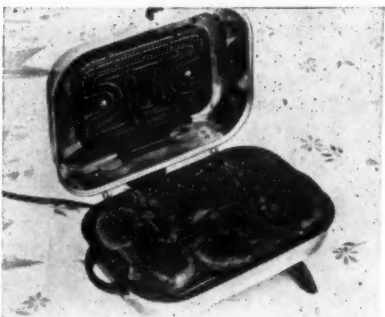
Outstanding feature, according to the company, is that both compartments operate off one condensing unit and have only one temperature control.

Exterior finish of the cabinet is hi-baked Dulux white enamel. Interior finish is hi-polished stainless steel.

Facilities are also provided in the unit for the rapid freezing of six large trays of ice cubes, the company said.

Jordon intends to distribute the model 10/4 through its present dealer distributor organization and through new dealers and distributors now being accepted.

Electric Table Broiler Handles 8 Chops at Once



NEW YORK CITY—International Appliance Corp. here has announced its broiling "Aristocrat" (model 400), electric table broiler with a broiling area of 125 sq. in.

Adaptable, according to the manufacturer, for broiling, toasting bread, warming rolls and muffins, and heating up leftovers, the appliance has a heavy-gauge body, triple chromium plated, with heatproof black bakelite handles and legs making it suitable for use right at the dinner table.

Capacity of the broiler is given as eight chops, 12 hamburgers, or two broiling chickens. A porcelain enamel drip pan is provided for use when broiling, and circulator vents in the hood prevent "stewing" of meats, the manufacturer points out. The wire grill is adjustable to two heights.

Heating element has a high nichrome content and is encased in a black glazed, chipproof, stainless refractory plate, which is said to be easily removed for cleaning.

Positive high and low heats are provided by the unit, which has a terminal safety guard to prevent shocks, shorts, and breakage. High heat setting is rated at 1,000 watts, while low heat is given as 450 watts. A cord and plug set with cool handle grip, reversible for high and low heat is provided.

Over-all dimensions of the "Aristocrat" are: length, 16½ in.; height, 8 in.; and depth 12½ in. Retail price of the broiler in zone 1 is given as \$22.50. Another model, the "Regent," retails for \$14.95 in the same zone, according to the manufacturer.

New Pocket Calculator Selects 11 Types of Data

PITTSBURGH—Airserco Mfg. Co., Inc. here, has introduced the Refrigeration Calculator, a copyrighted pocket-instrument which permits rapid selection of essential refrigeration data.

To aid the refrigeration service engineer in setting low pressure controls and thermostats, the calculator also selects hermetic unit motor terminal combinations, cut-in and cut-out thermo-settings, head and back pressure readings, evaporator temperatures. The rapid selection of 11 different types of refrigeration data is accomplished by means of two circular charts, mounted in a rigid plastic form.

The heavy mailing envelope supplied with the instrument provides a durable pocket case for the calculator.



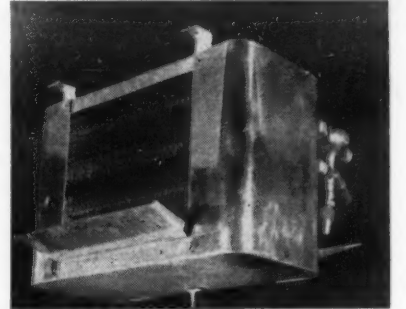
Pin-Up Lamp Designed for Use In Home or Office

FORT ATKINSON, Wis. — Moe Bros. Mfg. Co. here is marketing a new fluorescent pin-up lamp known as model M-218. Being a plug-in fixture the light may be used anywhere in the home, office, or commercial establishment where more light is needed, either permanently or temporarily, the manufacturer points out.

Finished in either chromium or Bonderized white enamel, the light is 24¼ in. long, the lamp has a slot

in the back plate to permit easy pin-up mounting. Two holes in the base (covered by the lamp when in use) are provided for horizontal, under-cupboard installations, the company reports.

The light uses a 15-watt T-12 fluorescent lamp, and is supplied with a 6-ft. cord. Width of the lamp is 1½ in., and the height is given as 2 in. It is available for use on a.c. only.



Tenney "Midget" cooling unit

'Midget' Cooling Unit Fits Into Limited Space

NEWARK, N. J. — Tenney Engineering, Inc. here has just announced a small cooling unit, known as the "Midget," for installations within a limited space.

Width and height of the three sizes now in production are given as 13¼ in. and 9¼ in. respectively. Depth is said to vary with capacity from 11 in. to 15 in. Capacities of the Midget models range from 1,500 to 2,400 B.t.u. per hour at 15° temperature difference.

It is reported that the new product

will provide adequate cooling for back bars, in-under counter refrigerating units, and for reach-in refrigerators of 16, 20, and 30-cu. ft. capacity.

Cooling coil is of 5/8 in. o.d. copper tubing, electroplated for protection against oxidation, and into which Tenney faceted fins are machine bonded.

The cooler is housed in a polished aluminum casing with all vertical corners rounded. Each unit is equipped with slotted hangers for installation. Weight is said to be approximately 30 lbs.

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Ferro-Therm is made from sheets of steel, with a special alloy coating, which reflect 90-95% of all radiant heat. It saves refrigeration costs because its low heat storage capacity assures a faster pull-down of temperature. It envelops the entire structure with a sheet of steel that provides a positive vapor barrier and does not adsorb odors or gases. Ferro-Therm provides the finest type of insulation for cold storage, fur storage and locker plants; also warehouses, test chambers and all-weather rooms.

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Selling Appliances Brings Even Flow of Business-- And Then Some, Commercial Refrigeration Dealer Finds

AUGUSTA, Ga. — Selling major home appliances can be very helpful to the commercial refrigeration and air conditioning dealer, W. F. Mingle-dorff, local refrigeration and air conditioning contractor, has discovered.

Recently, he invested \$18,000 in setting up an appliance showroom to "level out the peaks and valleys" in his contracting business. The appliances not only levelled out the peaks and valleys by eating up a major share of overhead expense, but they brought in a good profit in themselves.

Not only that, the wider recognition of the Mingle-dorff firm through the new appliance traffic led to an immediate increase in air conditioning and refrigeration sales, Mingle-dorff learned.

James Rankin, manager of the retail store, explained the Mingle-dorff move to appliance merchandising this way: "We're keeping our identity strictly as air conditioning and refrigeration specialists. However, there is really a close relationship between commercial refrigeration and air conditioning, and domestic refrigeration and air conditioning."

"Therefore, we were logical outlets for home freezers, refrigerators, etc. Carrying it to its logical conclusion, customers reasonably expect to be able to purchase all home appliances from a common source."

"As a result, we now merchandise all major and minor home appliances, and have gained the utmost confi-

dence of customers due to our reputation as air conditioning and refrigeration specialists."

With a facade resembling a fashionable apparel shop, the newly remodeled building provides spacious departments for home air conditioning, commercial air conditioning, major electric appliances, records, and radios. The records, like the home appliances, have been responsible for a large share of increased showroom traffic.

Currently, the retail division has three salesmen with one working exclusively on outside calls and another man ringing doorbells half-time.

"Eventually, we will have five outside men," Rankin said. "They will call on the homeowner with package air conditioning, water heaters, refrigerators, ranges, washing machines, and in fact, the whole lineup carried by the store."

Rankin has worked out a salesman's compensation plan whereby commissions run from 2% to 5%, with exceptionally high salaries.

"Our theory is that during the time of short merchandise conditions, we will pay top salaries and not worry about commissions," Rankin said. "When increased deliveries make efficient selling necessary, we'll give salesmen a better percentage, and a lower salary, which is the way they will want it anyhow."

Prospect leads are obtained from store calls, satisfied customers, regu-

lar newspaper advertising, radio spot announcements, and telephone solicitation. Package air conditioning installations in stores have created many appliance prospects too, according to Rankin.

Due to the fact that Mingle-dorff's, Inc., is set up to handle large-scale refrigeration and air conditioning, appliance service has been easy to incorporate. The service department includes nine men, five expert mechanics and four helpers, who can completely rebuild and overhaul refrigerators and all major appliances, in addition to commercial air conditioning systems.

Mingle-dorff's rate for repair work on refrigeration or air conditioning is \$3 an hour; \$2.50 an hour for home appliances, domestic refrigerators, etc. Three trucks are on duty to handle any kind of service work. The company maintains all its own warranties.

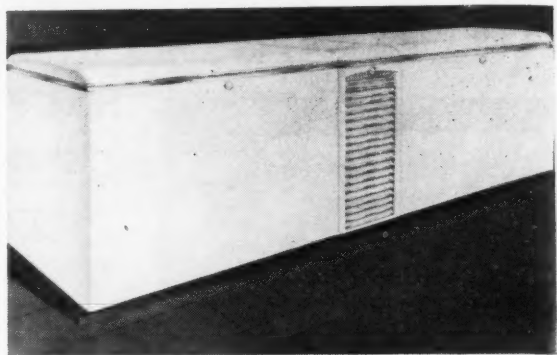
The engineering department, which designs, engineers, and supervises installation of the air conditioning and refrigeration systems, consists of A. L. M. Amphlett, H. C. Hungerford, and Rankin—all three experts.

Ace Refrigeration Established

REDONDO BEACH, Calif. — Ace Refrigeration Co. is the firm name under which Raymond Medina has published a certificate that he is conducting business at 2703 Vail Ave., Redondo Beach.

A "Different" Farm Freezer

This long narrow Real-freeze home or farm freezer can be pushed through the average width door, its manufacturer, Wentink & Co. claims. Its table height adds to its utility. A cutting board for preparing foods for freezing comes with it.



Wentink's Realfreeze Boasts Unique Design

GRAND RAPIDS, Mich.—A line of home and farm freezers claimed to be "different" in a number of design features, is being manufactured and marketed by Wentink & Co. here.

Under the trade-name "Realfreeze," the freezers are constructed with gas blown plastic insulation, which the manufacturer says provides certain advantages.

"Realfreeze" models are also featured by the inclusion of a cutting board for preparing foods for freezing.

Controls for the refrigerating system are so located as to be out of the reach of children, yet easily accessible.

The "deluxe 8" model is 62 in. long, 24 in. wide, and 36 in. high, being so designed that it can be pushed through any average size door.

It is table-height high. Exterior finish is in a Bonderized, white enamel.

Open Display Cases Lure More Customers To Buy

PITTSBURGH — Open type low temperature display cabinets for frozen foods and ice cream have more customer sales appeal than closed type cases.

So says R. E. Shaw, service manager for the Pittsburgh Case Sales Co., who can cite specific cases to prove it.

The Pittsburgh Milk Co., he relates, installed a 16-cu. ft. Jordon open frosted food cabinet in its dairy store and boosted packaged ice cream sales by \$60 the first day. What's more, sales stayed at the new high level.

The dairy claims that the new open type case, though it is the same size as the closed case it replaced, doubled the cooling capacity by lowering the temperature another 15°, on the same operating time and slashed costs by 30%.

At Butler, Pa., a supermarket conducted a two months long sales experiment by installing both an open type and a closed type frozen food case side by side and near the entrance.

During the experiment, the open case sold three times the volume of frozen foods that the closed one did.

The supermarket operator claimed that the customers seemed impressed by the "cold appearance" of the open type cabinet, induced by the frosting over of the black plastic interior liner.

A third instance cited by Shaw was the installation of an open type ice cream case in the E. J. Ehrler & Sons bakery here.

Previously, Ehrler, who specializes in wedding cakes, had sold ice cream as a sideline from a closed storage cabinet.

He placed the new open case, however, by the cake display so that customers had to walk around it upon entering the store. Result: ice cream sales jumped 30%.

North Calif. Contractors Ask No Cut In Power For Commercial Units

SAN FRANCISCO — Looking toward cushioning the public against possible impairment of public health through the conservation of perishable foods in the drought and power crisis, the Refrigeration Contractors Association of Northern California has requested the State Public Utilities Commission to exempt all commercial refrigeration from power curtailment for the duration of the emergency.

Z. E. Jones, association executive vice president, has written to the mayors of 28 key cities in the area calling attention to the position of the industry in the present crisis, following Governor Warren's urgent appeal for the formation of local conservation citizens' committees, as follows:

"Because of the well known vital relationship of refrigeration to public health and the preservation of perishable foods, it is respectfully requested that you appoint a member of our industry to your local committee. Such member might well represent not only the industry but also in a special sense all users of commercial refrigeration in your city."

Jones further commented: "While we do not wish to spread hysterical propaganda, we feel a solemn warning should be issued against the inherent dangers which we foresee."

Ray Winther, association president, points out that at a recent public hearing before the utilities commission his group went on record against power curtailment for commercial refrigeration generally. He further states:

"The industry has become the guardian of the public health and perishable food supply through refrigeration. Food preservation requires constant temperatures. Anything that seriously interferes will only invite widespread spoilage, waste, shortages, and higher prices."

Moncher Represents Tenney In Metropolitan N. Y.--N. J.

NEWARK, N. J. — Tenney Engineering, Inc. here, has announced the appointment of Sam C. Moncher as engineering sales representative for the metropolitan New York and northern New Jersey area.

Moncher has had 15 years of experience in the refrigeration field. After receiving his engineering degree from Harvard, he first went with Sam C. Moncher Virginia Smelting Co. He then joined Peerless of America, Inc., as sales engineer and later was regional manager for Electric Power Equipment Corp.

Moncher has contributed numerous articles on refrigeration topics to the business press in the refrigeration field.



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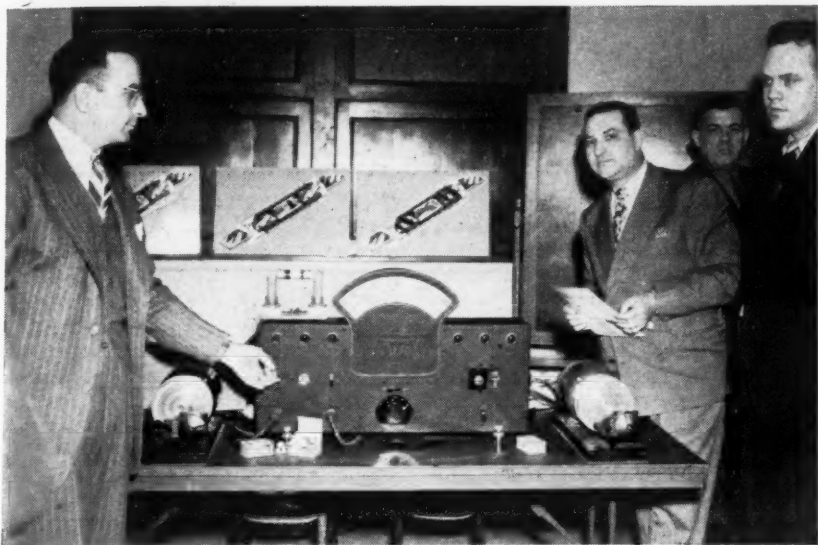
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Contractors Shown How Motor Protection Can Be Provided by Dual-Element Fuses



Edgar Harder (left) and J. D. Kinnear (extreme right) employed this demonstration setup featuring a giant-sized ammeter to show Chris Milazzo and Bill Mercier and other members of the Refrigeration Contractors Association of Detroit how dual-element fuses will provide additional protection to electric motors.

DETROIT — How dual element fuses can give added protection to electric motors for both starting and running overloads was outlined and demonstrated before members of the Refrigeration Contractors Association of Detroit at their recent meeting here.

Edgar D. Harder, district manager for the Bussmann Mfg. Co. of St. Louis, aided by J. D. Kinnear,

Detroit representative of the firm, told and showed the contractors how Buss Fusetrons can be employed in motor protection service.

Ordinary fuses, if selected to handle the running load of a motor, will "blow" when the motor is started, but if they are sized to handle the starting load, there will be too great a margin of safety for protection against overloads that

might occur during the running period, he asserted.

For example, he said, a 1/4-hp. split-phase motor under average running conditions could draw about 4 1/2 amps, but when starting the momentary load can jump to as high as 35 amps. An ordinary fuse will blow immediately under this starting load, but not a dual-element fuse such as the Fusetron, he explained.

To demonstrate this, Harder showed a large test panel to which motors were connected, and which provided fuse boxes. Chief feature of the panel was a giant-size ammeter which showed the starting and operating current characteristic of motors.

"These momentary starting overloads are harmless to the motor and the wiring, so the ordinary fuse which blows when starting the motor has no more than nuisance value," he claimed.

Available in both clip and plug types, these dual element fuses consist of thin copper "links" in circuit with a spring-loaded thermal cutout device. The thermal cutout breaks the circuit when its temperature reaches 280° F. in contrast to ordinary fuses with a zinc link which does not melt until a temperature of 786° F. is reached, according to Harder.

It is because of their construction and the consequent greater time lag that these fuses will carry the short-lived high starting current, but will promptly blow in the event of a short circuit. Quicker protection against continued overload and overheating are likewise provided by the thermal cutout, Harder declared.

This latter feature is important where poor contact between fuse and clip or a poorly soldered or loose connection at a lug or plate in the circuit may cause excessive heating.

With a conventional fuse, this heat would have to build up to 786° F. before it blew, but in the meantime, such heat would oxidize contacts, destroy insulation, crack the contact mountings, and injure or destroy panels and switches, Harder said.

Among the other advantages of dual element fuses which he pointed out was their use in conjunction with thermal cutouts or overload relays which are normally used with large motor installations.

"Like all mechanical things, these mechanical safety devices may once in a great while stick or fail to break the circuit in the event of a motor overload, and thus would cause the motor to burn out," Harder said. "If a dual element fuse were substituted for the standard fuse which gives short-circuit protection in such installation, the motors would then have double protection against burn-outs."

With dual element fuses, he also mentioned, switches and panelboards can be more nearly sized to the requirements of the job. Ordinary practice usually calls for oversize switches, panels, and fuses, all at greater expense, but dual element fuses would cut the size requirements of these items and make for less expensive wiring.

This type fuse will likewise permit the installation of a larger motor or additional motors on a circuit without the necessity and expense of erecting a larger panel or switch, he explained.

For example, on a 20 amp. motor 60 amp. fuse must be provided because the starting current is about 120 amps. If the load is increased to 40 amps., 125 amp. fuses in a 200 amp. switch have to be installed to hold the starting current of 240 amps.

If, however, 60 amp. dual element fuses are installed in place of conventional fuses, the load can be increased to 40 amp. without disturbing either the switch or the fuses, he said.

A 60-amp. fuse will hold the 120 amp. starting load of a 20 amp. motor for about 31 seconds, while a 60 amp. Fusetron will hold the same load for 96 seconds. But if the starting current goes to 240 amps., as it will with a 40 amp. motor load, the conventional 60 amp. fuse will blow in 1.4 seconds, that is, before the motor can start.

A 60 amp. dual element fuse, however, will hold a 240 amp. starting load for 19 seconds, which, according to Harder, is ample time for the motor to start. Thus, no increase in panel, switch, and fuse need be made.

Reco Products Div. Moves To New Address In Philadelphia

PHILADELPHIA—The Reco Products division of Refrigeration Engineering Corp. here has moved to 2020 Naudain St., Philadelphia 46, Andrew J. Asch, Jr. has announced. New telephone number for the division is Kingsley 5-3630.

Ventilators Change Air In Cafe 10 Times Hourly

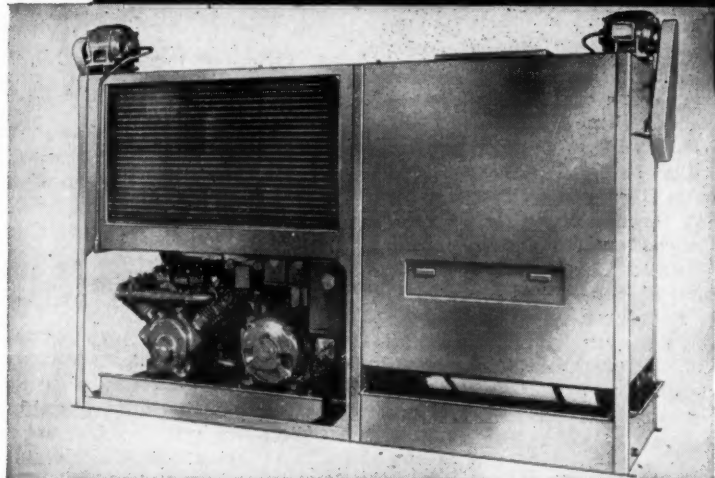
NIAGARA FALLS, N. Y.—Air conditioning and refrigeration have an important role in the modern cafeteria recently opened at the Electro Metallurgical Co. plant here.

The ventilating equipment, especially designed for the building, is mounted in a penthouse on the roof. All air coming into the building is washed and filtered through special air ducts. This makes possible a complete change of air in the building every six minutes.

The soffits, radiator grills, and ventilating grills are made of stainless steel, as are the large ventilating hoods built over the cooking equipment and dishwasher unit.

Considerable stainless steel refrigeration equipment is installed in the new cafeteria, much of which was designed and manufactured especially for the company. There is a special stainless steel salad refrigerator with opening both to the kitchen and dining room, and a large walk-in low temperature refrigerator.

GOVERNNAIR offers more in air conditioning equipment!

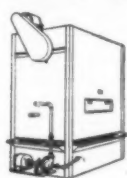


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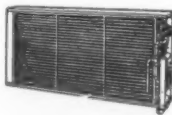
AIR-CONDITIONERS



EVAPORATIVE CONDENSERS



UNIT COOLERS



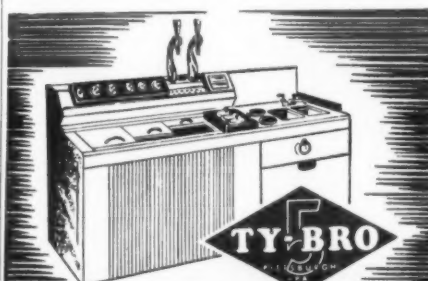
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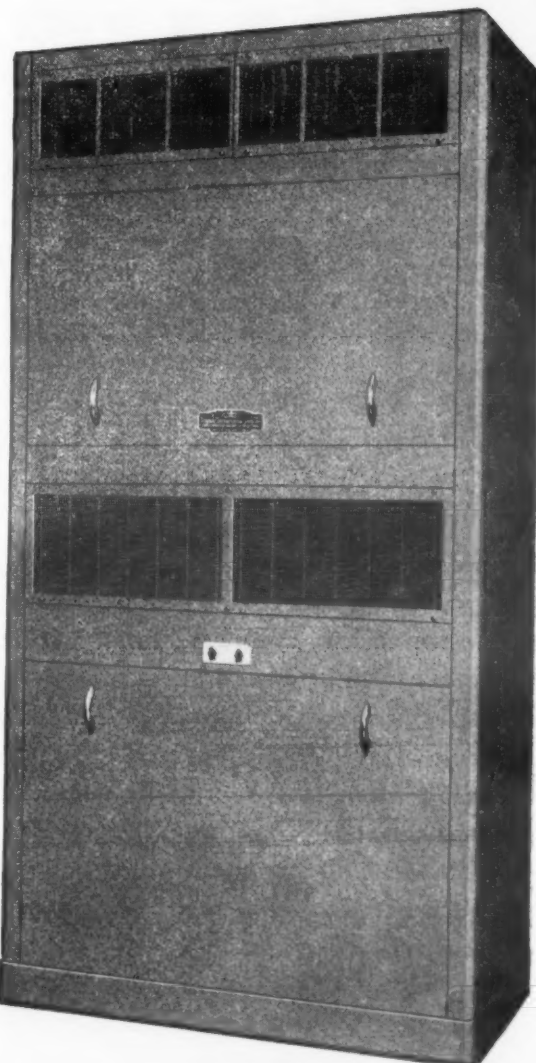
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Refrigeration Problems And Their Solution

By P. B. Reed

For Service and Installation Engineers



Manager, Refrigeration
and Air Conditioning
Division, Perflex Corp.

Refrigerant Cylinders (Continued)

The Bureau of Explosives, acting for the Interstate Commerce Commission, have two pressures for a cylinder in their regulations, Service Pressure and Retest Pressure.

SERVICE PRESSURES

The Service Pressure may be considered the design pressure, or the maximum pressure to which the cylinder would be subjected in ordinary service. The Service Pressure depends upon the refrigerant the cylinder is to contain, although each refrigerant does not have a separate Service Pressure of its own.

Several refrigerants that have normal saturation pressures somewhat near one another, are classed together and included under one Service Pressure and these refrigerants could use a cylinder of the same type, strength, and other specifications. In fact, there are only about seven types of cylinders for all the refrigerants although these seven may be made in many sizes.

Every cylinder has stamped upon it an "ICC number." This number

indicates the type of cylinder it is and from this number can be determined the Service and Retest Pressures and the kind of refrigerant that can be put in the cylinder.

Some of the ICC numbers include the Service Pressure directly. The Service Pressure of cylinders marked ICC3A300, ICC3B300, ICC4A300, ICC4B300, etc., is 300 p.s.i.g. For cylinders marked ICC3A480, ICC4A480, etc., the Service Pressure is 480 p.s.i.g.

Some ICC numbers do not directly include the Service Pressure but Table 2 shows what the Service Pressures of these types of cylinders are.

TABLE 2

ICC Number	Service Pressure
ICC3	1800
ICC3EE	1800
ICC4	300
ICC8	250
ICC25	300
ICC33	480
ICC38	250

Thus the Service Pressure may be taken directly from the ICC number on the cylinder, or determined by referring to Table 2.

The ICC type number covers the specifications for the construction of that cylinder, material, thickness of the metal, type of valve, safety device, if any, and a test pressure that is much higher than the Service Pressure so as to allow a margin of safety.

RETEST PRESSURES

When a new cylinder first goes into service it is apt to be in excellent condition, but after a while it may get considerably weakened by rough handling or corrosion due to moisture in with the refrigerant, or from someone turning a torch directly on the cylinder in order to speed up the removal of refrigerant from the cylinder. The valve may have become damaged or worn and the safety device may be leaking.

In an effort to keep the refrigerant cylinders that are in field use, in good condition, ICC requires that they be retested at regular intervals, at "Retest Pressures" which are the same as those that the manufacturers' tested them at, when they were new.

Retest Pressures are not shown directly on the cylinder but they may be determined for the different types of cylinders by referring to Table 3. It will be noted that in some cases they are specified directly, as 3000 p.s.i.g. for ICC3 cylinders and 700 p.s.i.g. for ICC4 cylinders; but in most instances the Retest Pressure must be determined by multiplying the Service Pressure by a factor.

TABLE 3

ICC Number	Retest Pressures (PSI)
ICC3	3,000
ICC3A, 3D, 4A	5/3 x Service Pressure
ICC3B, 3BN, 4B	2 x Service Pressure
ICC3C, 3E 4C, 8	2 x Service Pressure
ICC4	700
ICC25, 38	500
ICC33	800

For example, the Retest Pressure for ICC3A, 3D and 4A cylinder is the Service Pressure times 5/3 or 1 2/3 or for ICC3B, 3BN, 4B, etc. the Retest Pressure is twice the Service Pressure. So for an ICC3A300 cylinder the Retest Pressure is 300 x 1 2/3 or 500 p.s.i.g. For an ICC3B300 the Retest Pressure 600 p.s.i.g.

The date that the cylinder was last retested is also stamped on the cylinder and no one is allowed to refill the cylinder if it has passed out of the test period, which is 10 years for non-corrosive refrigerants and five years for corrosive refrigerants.

Up to a year or so ago this provision for a "non-corrosive" refrigerant was not included in the regulations and all cylinders had to be retested every five years.

There has been some controversy over what is and what is not a "corrosive" refrigerant so a change may be made in this provision.

Practically all cylinders used for refrigerants have to be retested periodically, except small sample cylinders less than 2 in. in diameter and less than 2 ft. in length. Other ICC regulations that apply to allowable pressures and retesting of refrigerant cylinders are:

1. Pressure in the cylinder at 130° must not exceed 1 1/4 times the Service Pressure; except cylinders for carbon dioxide, nitrous oxide, and acetylene.
2. Pressure in the cylinder at 70° must not exceed the Service Pressure.
3. Cylinder must not be shipped nor charged without the consent of the owner of the cylinder.
4. A cylinder that shows evidence of having been exposed to fire, including a blow-torch flame put on it to hasten removal of refrigerant, must not be refilled until the cylinder has been retested.

SATURATED VAPOR PRESSURES

All of the foregoing discussion of pressures in the refrigerant cylinder, is based on saturation conditions, that is, that there was liquid refrigerant in the cylinder, but not enough to completely fill it with liquid, so that there is some space left for vapor.

To understand how to determine (Continued on next page)



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Cylinders --

(Continued from preceding page)

how much liquid a cylinder can safely hold, let us examine what happens to the volume of the liquid when its temperature changes. We have found that the vapor pressure goes up when the liquid is warmed and down when it is cooled, in accordance with the saturation temperature pressure table. Does the volume of the liquid and its proportion to the total volume of the cylinder change as the temperature changes? Can a cylinder be partially full of liquid at one temperature and completely full at another temperature?

With some exceptions, all gases, liquids and solids expand as they are warmed. If a rubber balloon at a temperature of 60° is warmed to 100°, the balloon becomes larger because the gas in the balloon increases in size. A bottle entirely full of water at 60° will overflow if it is warmed to 100°, because the water increases in volume as it is warmed. An iron bar is longer at 100° than at 60°, for the iron increases in size with temperature.

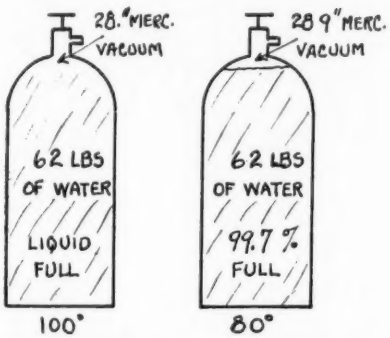


Fig. 1—One cu. ft. cylinder. Water liquid density = 62 lbs./cu. ft.
Fig. 2—One cu. ft. cylinder. Water liquid density = 62.2 lbs./cu. ft.

Thus if a cylinder that has an internal volume of 1 cu. ft., is filled with water at 100°, there will be just 62 pounds of water in the cylinder for the "liquid density" of water at 100° is 62 pounds per cubic foot.

With the cylinder "liquid filled" with water at 100° (62 pounds of water in it) we close the valve and cool the cylinder and water to 80°. The water in the cylinder will shrink in size. There will still be the same amount of water in the cylinder so it

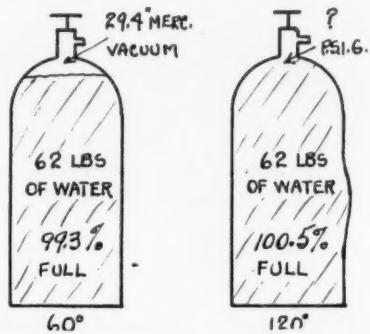


Fig. 3—One cu. ft. cylinder. Water liquid density = 62.4 lbs./cu. ft.
Fig. 4—One cu. ft. cylinder. Water liquid density = 61.7 lbs./cu. ft.—stretched 9 cu. in.

will still weigh 62 pounds, but the liquid density of water at 80° is 62.2 pounds per cubic foot, so .2 of a pound would have to be added to bring it back up to full again, otherwise there will, at 80°, be a small space equivalent to the volume of .2 of a pound, or about 6 cu. in.

If the 62 pounds of water in the one cubic cylinder is cooled still further down to 60°, it will shrink some more. At 60°, the liquid density of water is 62.4 pounds per cubic foot. Since there are only 62 pounds of water in the cylinder and it could hold 62.4 pounds of 60° water, there is an "empty" space equivalent to .4 pounds of water or about 12 cu. in.

But the 12 cubic inch space is not empty. It is filled with water vapor at a saturation pressure corresponding to the temperature of the water. From steam tables we find that at 80° the water vapor pressure in the cylinder is 1/2 p.s.i. absolute or just a little less than 28.9 in. of mercury vacuum. There would be a pressure on the outside of the cylinder trying to crush it, of about 14.2 p.s.i. greater than the 1/2 p.s.i. inside the cylinder.

At 60° the vapor pressure in the cylinder is even lower, about 1/4 p.s.i. or 29.4 in. of mercury vacuum. Thus there is a pressure outside the cylinder of about 14.4 p.s.i. greater than inside.

We started with a cylinder having an internal volume of exactly 1 cu. ft., completely full of water at 100°, with the valve closed. We cooled it to 80° and then to 60°. In both cases, the water shrank in volume, leaving a small space filled with water vapor.

What if, instead of cooling the 100° water we warm it to 120°? The

water will expand. At 120° the liquid density of water is 61.7 pounds per cubic foot. But we have 62 pounds in the cubic foot. This was all right at 100°, for the liquid density of water at 100° is 62 pounds per cubic foot. But now at 120° the cubic foot will hold only 61.7 pounds of water. What is to become of the .3 pound difference? It can't get out; the valve is closed.

LIQUIDS INCOMPRESSIBLE

Water and other liquids are practically incompressible, so something just has to give. The cylinder has some elasticity. The sides will bulge a little to give enough extra space to accommodate the .3 of a pound or approximately 5 ounces of water.

But there is a limit to how much the cylinder will stretch without bursting. Some cylinders may give a little more than others but if the temperature of a "liquid full" cylinder continues to rise, a temperature finally comes at which the amount of extra space required is more than the cylinder can stretch, so the cylinder bursts.

After the cylinder becomes liquid-full, the saturation temperature-pressure condition no longer holds true, for there is no longer a vapor space. Even if it did, the pressure of the water vapor at 120° would still be below atmospheric pressure.

Cylinders are made of steel and steel cylinder walls do not bend unless there is some very strong pressure put on them. At 120°, 5 ounces of water had to be accommodated, so the cylinder wall had to stretch to give about 9 cu. in. of space.

Some force, and it must be a very strong force, had to push those cylinder walls out to give that extra 9 cu.

in. of space. It wasn't water vapor pressure. What was it?

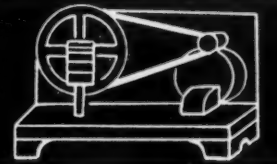
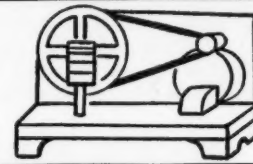
HYDROSTATIC PRESSURES

It is called "hydrostatic" pressure. A more common word for it is hydraulic pressure, and it can be enormous. It can bend steel cylinder walls or if the walls reach their limit of "stretch," the hydrostatic or hydraulic pressure can very easily burst the steel walls.

As soon as a cylinder becomes liquid-full, that is, completely full of liquid, it becomes dangerous! Hydrostatic pressure starts then, and builds up rapidly to thousands of pounds per square inch, if the cylinder doesn't burst first.

So we must never allow a cylinder to become liquid-full, or if by accident it does become liquid-full, a safety device must open and release the pressure before it can get up high enough to cause the cylinder to burst.

(To Be Continued)



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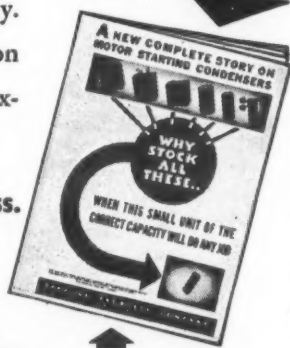
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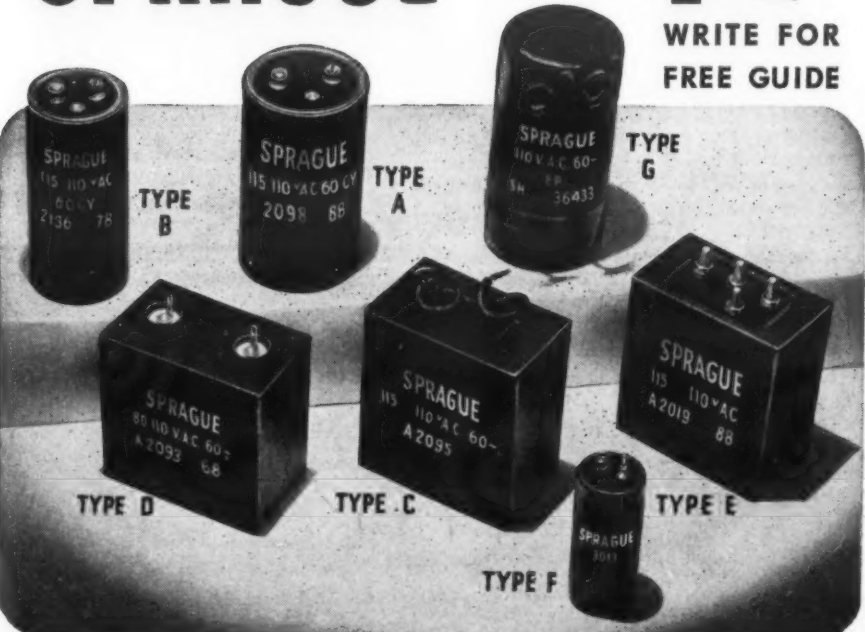
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Mann Sees Active Market For Refrigerated Cases In South American Stores

NEW YORK CITY—A "very active" market in South America for quality refrigerated display equipment made in the United States was reported by Al Mann, general sales manager of the export division of Fleetwood-Airflow, Inc., upon his recent return from that area.

"Our neighbors south of the border are undergoing an awakening to the advantages of modern, efficient, refrigerated display equipment," Mann said. "I have found an increasing number of merchants, even in small places off the beaten path, are keenly conscious of the advantages that good store and market equipment can bring to them as a means of increasing their business."

"I find that the local dealers who approach these merchants with recommendations for improvements, both in efficiency and appearance-wise, get a ready ear. I have likewise noted an increasing appreciation of equipment which will provide better preservation of foods."

Mann was scheduled to leave again shortly for an extended tour of Central and South America. He will present new models recently added to the Fleetwood line to Fleetwood-Airflow dealers.



Al Mann



2 Independent Export Firms Set Up In East

**Rackin International Handles
Refrigeration, Air Conditioning**

**Consolidated Conditioning
Reorganizes Export Dept.**

NEWARK, N. J.—Formation of Rackin International here to act as a manufacturers' foreign sales representative distributing refrigeration and air conditioning equipment throughout the world was announced recently by Harold Rackin, president.

Prior to the formation of his own firm, Rackin was export manager and an officer of American Coils Co. The new company, located at 1025 Broad St., will be the export department of American Coils and other firms for whom Rackin had acted as combination export manager.

Rackin was manager of the industrial division of Corneliusen & Stakgold, Inc., New York and Antwerp, Belgium, for several years. His associates are said to have had years of engineering experience in the refrigeration and air conditioning fields.

NEW YORK CITY—Reorganization of its export department as a separate corporation and election of Alexander G. Lensen, former export manager, as president of the new firm have been announced by Consolidated Conditioning Corp. here.

All export activities of Consolidated Conditioning, as well as all franchises and accounts previously handled by it, have been turned over to the new organization, called Concor International Corp. Concor, which is housed in the Consolidated building at 26 West 47th St., is entirely divorced from the domestic activities of Consolidated Conditioning, it was reported.

Consolidated said the continuing increase in the scope and activities of the export department made the move necessary.

Crane Cab Coolers Going In S. African Steel Mill

IGE Factory In Mexico To Make Appliances

PITTSBURGH—Dravo Corp. here has received an order for the South African Steel Co., Johannesburg, for six crane cab coolers. The units will be installed on three soaking pit and three ladle cranes in the steel mill that is under construction for that company in South Africa.

Dravo crane cab coolers provide conditioned air for the cabs of cranes operating in high temperatures, heavy dust, or noxious fumes, according to the firm. The unit is said to cool or heat the air, as required, and filters it.

SCHENECTADY, N. Y.—Production of household appliances was scheduled to get under way in March at International General Electric Co.'s new \$1,000,000 plant near Mexico City, Mexico, it has been reported.

Located on the Laredo highway, the plant was to employ several hundred persons. It is wholly owned by IGE. Although production will be confined to appliances for the present, other electrical products will be manufactured in the future.

It was also announced that machinery for a new IGE fluorescent lamp and tube factory in Buenos Aires, Argentina, is ready for shipment. This factory will reportedly be one of the largest of its kind in South America.

Britain's Thermo Controls Inferior to Ours--Raney

MINNEAPOLIS—Lack of mass production facilities is keeping the cost of British-manufactured thermo controls three times above those produced in the United States, E. C. Raney, president of Ranco Inc., told the Minneapolis chapter of the American Society of Refrigerating Engineers recently.

Raney, who recently returned to this country from a trip to England, said thermo controls found in that country were bulkier and not as efficient as American products.

Tracing the development of the thermo control during the past 30 years, he pointed out that the most notable feature of today's controls is compactness. Controls 25 years ago were heavy and large—from 10 to 12 in. long, while current controls have been reduced to an inch and a half in length by an inch and a quarter in width, he said.

Universal Refrigeration Ltd. Announces New Address

TORONTO, Ont., Can.—Universal Refrigeration, Ltd., distributor of Universal Cooler products here, has moved to 1189 Bathurst St., the company has announced. Telephone number for the organization is Kenwood 9476. Universal also handles commercial refrigeration products for every application.

Fenyvest Joins Fedders

BUFFALO—John W. Fenyvest, former vice president of Pioneer Metal Export Co., New York City, has been appointed export manager of Fedders-Quigan Corp., the firm announced. Fenyvest is said to have traveled extensively throughout the world and to have had wide experience with export marketing.

Trade Mart Opens In July

NEW ORLEANS—The International Trade Mart now under construction here is scheduled to be opened in July, it was announced recently. American Refrigerator & Machine, Inc., is one of the firms heading this non-profit institution.

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Flywheel Works

Heat Pump Using Water Storage for Peaks Proves Value In Utility Test Installation

NEW YORK CITY—Combining a water storage tank for its flywheel effect in a heat pump air conditioning system may have interesting possibilities for some applications.

How this has worked out in one installation was described by Philip Sporn, president of the American Gas and Electric Service Corp., and E. R. Ambrose, air conditioning engineer for the same concern, in the November, 1947, issue of *Mechanical Engineering*, official publication of the American Society of Mechanical Engineers.

An electric load such as summer air conditioning, having a high demand factor and a low power consumption per unit of capacity, does not favor a low electrical-energy cost. This is particularly true if the added load makes no improvement in the system load characteristic, they point out.

Generally, commercial summer air conditioning, as well as residential heating and cooling, have been observed to have closely the same shape as customers' other electrical loads, resulting in an additive load coming directly on system peaks. Also, it has been noticed that the summer air conditioning load is one of the contributing factors for the shifting of the annual peak from winter to summer on a number of the utilities' systems.

Storage offers a practical method of making the air conditioning load more attractive to the utility and more economical to the customer because not only is it possible to reduce the magnitude of the maximum load by using equipment of smaller capacity operating for longer periods,

but the time of occurrence can also be controlled.

In this way the air conditioning load may be shaped over a 24-hour period in such a manner that, when combined with lighting, electric ranges, electric hot-water heaters, and other commercial and residential loads, the total maximum demand for all requirements is materially reduced.

In fact, in many cases it may be found possible to suitably size and arrange the storage during both the heating and cooling cycle so as to require comparatively little in the way of additional power facilities for the air conditioning load.

Storage can be used with almost any type of heating and cooling system, but it appears to be particularly adapted to a heat-pump system using air as the heat source. The chief disadvantages of air as the heat source are: (1) As the outdoor-air temperature drops, the heating demand of the structure increases, and the output of the heat-pump equipment decreases; (2) as the outdoor temperature falls below 32° F., frosting of the heat-absorbing coil is a possibility.

Storage seems to be an ideal combination with an air system, because during the heating cycle and cooling cycle it is possible to store hot or cold water during mild weather for use when extreme temperatures are being experienced. Also, with this type of system, defrosting can be simultaneous with the heating of the conditioned space.

Since the storage tank can be charged in mild weather for use as a booster during extremely cold or

Large Heat Pump Installed for Utility

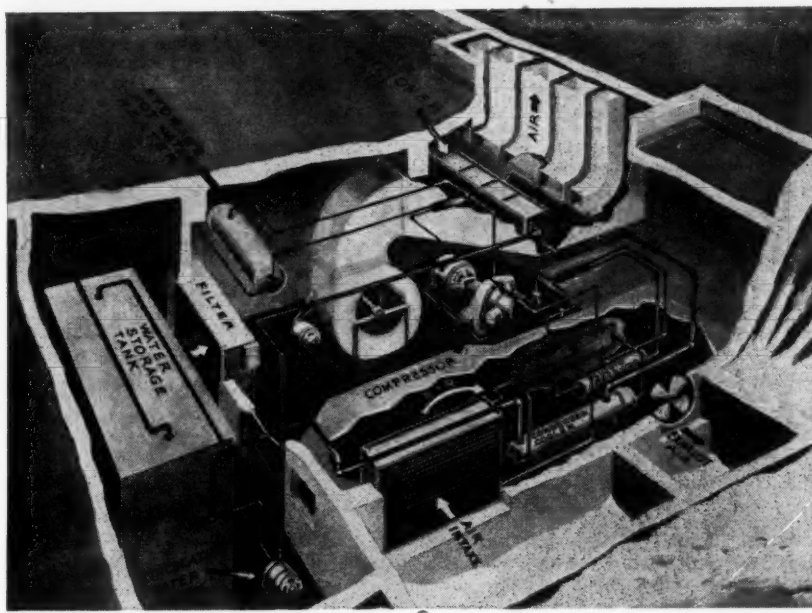


Fig. 1—Heat pump employed for year-round air conditioning in control building of Tidd plant of the Ohio Power Co. is shown in this isometric view. Note the water storage tank at left which is intended to preserve heat or cooling effect for extreme temperatures.

warm days, it is possible to size the compressor and other equipment to have an output substantially less than that required for extremely low or high outdoor temperatures.

This possibility not only allows use of a smaller compressor and other refrigeration equipment to satisfy the conditioner space year-round, but also results in a higher coefficient of performance, since charging the tank can take place when outdoor temperatures are most favorable.

Such a system has been installed in the control building of the Tidd

Plant of the Ohio Power Co. at Brilliant, Ohio. Air is the heat source, water storage is employed, and the system is located in a section of the country which experiences wide fluctuations in outdoor temperatures.

The control building of the Tidd Plant, erected in 1946, has one story with a partial basement. The structure is 82 ft. long x 52 ft. wide x 12.2 ft. average height, with a total volume to be conditioned of 52,000 cu. ft.

The construction consists of reinforced-concrete foundations and floor with precast-concrete plank roof sup-

ported on steel beams, which rest in the masonry walls. The roof is insulated with 2-in.-thick rigid insulation set in pitch on the outside of the roof deck which in turn is covered with a 20-year tar-and-gravel roof.

The walls consist of 8 in. of brick with 4 in. of glazed tile on the interior. The ceilings are furred and plastered and the floors are covered with asphalt-tile flooring.

Climatological data, giving the daily minimum and maximum temperatures, are published by the United States Department of Commerce Weather Bureau for most regions of the United States. This data was studied for the past several years for Steubenville, Ohio (closest weather station to Brilliant, Ohio), to determine the probable minimum and maximum temperatures which would be encountered during the heating and cooling seasons at Brilliant.

The heat-loss calculations for the structure were based on an outdoor temperature of 0° F. and an indoor temperature of 70° F., and the heat-gain calculations on outdoor temperatures of 92° F. dry bulb and 72° F. wet bulb, and indoor temperatures of 78° F. d.b. and 65° F. w.b.

Using these design temperatures, the heat loss was calculated to be 200,000 B.t.u. per hr. and the heat gain 164,850 B.t.u. per hr. The breakdown of these totals is given in Table 1.

The temperature of 22.3° F. was chosen as the equipment design temperature during the heating cycle and 92° F. d.b. with a corresponding 72° F. w.b. for the cooling cycle.

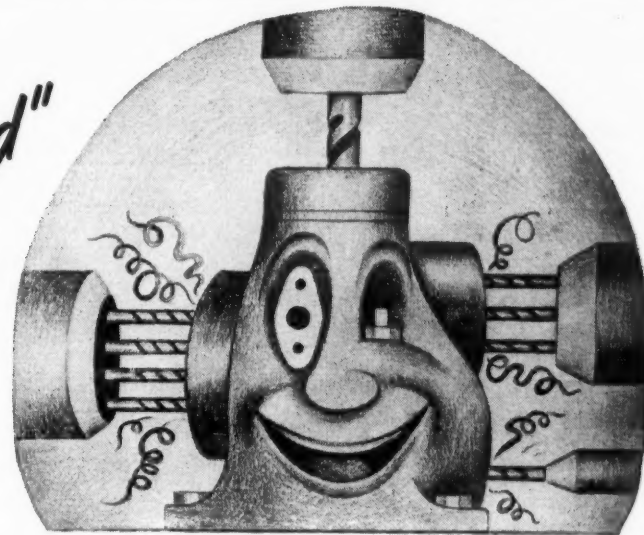
There is a possibility that the average daily dry-bulb temperature will drop below the equipment design

(Continued on next page)

Table 1—Heat Gain-Heat Loss Calculation

	Heat Gain, B.t.u. per hr. 78° F. d.b. and 65° F. w.b. inside 92° F. d.b. and 72° F. w.b. outside	Heat Loss, B.t.u. per hr. 70° F. d.b. inside 0° F. d.b. outside
Sensible heat:		
Conduction and solar radiation.....	78,654	168,700
Lights	47,200	
Ventilation air	22,800	31,300
People	900	
Latent heat:		
Ventilation air	14,000	
People	1,296	
Total	164,850	200,000

*"I'm being bored
but you'll be interested"*



... in these NEW General Electric Condensing Units

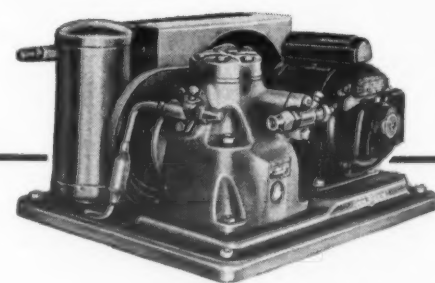
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Electric Heater Aids Heat Pump System

(Continued from preceding page)

temperature of 22.3° F. on a portion of 22 days during the heating season. Of this total, six days are 20° F. or above, seven between 17° and 20° F., and the remaining nine days between 3½° and 15° F.

During the cooling cycle the daily average dry-bulb temperature does not exceed the 92° F. selected equipment design temperature in the particular year chosen; consequently, if the equipment satisfies the heating requirement there will be no particular problem during the cooling cycle.

A storage tank, plus an auxiliary electric heater, are incorporated in the heat-pump system to furnish the additional heat required for the structure on the days having an average daily temperature below 22.3° F.

The daily average temperature of 15° F., experienced on Dec. 14, and the temperature of 14½° and 8½° F., experienced on Dec. 20 and 21, respectively, are preceded by several days of daily average temperatures above 22.3° F. Likewise, the 14½° F. experienced on March 3 and 14° F. on March 4, are preceded by several warmer days to permit charging the tank sufficiently to take care of the added heat requirement of the structure above that supplied by the heat-pump equipment.

However, the 12° F. on Feb. 14, the 3½° F. on Feb. 15, and the 8½° F. on Feb. 16 do not allow any time for the charging of the tank. Consequently, the storage tank, plus the auxil-

How Output of Heat Pump Balances Heat Loss

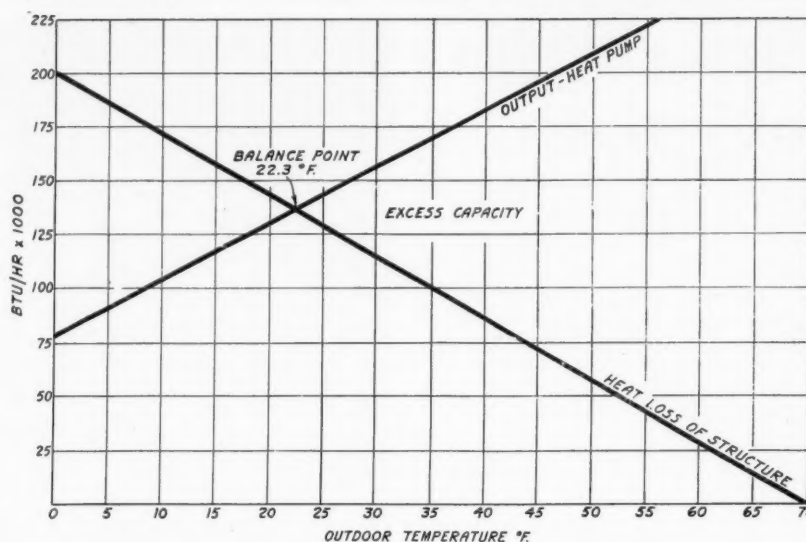


Fig. 2 shows that the output of the heat pump in the Tidd plant balances the heat loss of the building at an outdoor temperature of 22.3° F.

ary heater, must be of sufficient size and capacity to furnish the additional heat required during this three-day period. If this period is satisfied, the additional heat required for any of the other periods mentioned, can easily be met.

Fig. 2 shows the heat loss of the structure and the heating capacity of the heat-pump equipment at various outdoor temperatures. It can be noticed that the heat-pump balances the heat loss at an outdoor temperature of 22.3° F. Below this temperature of 22.3° F., the heat-pump equipment has insufficient capacity to meet the heating requirements, and above this point the heat pump is capable of supplying considerable ex-

cess capacity.

The purpose of the storage tank, during the heating cycle, is to furnish the heat requirements during those days when the capacity of the heat pump is insufficient. The storage tank is charged with warm water by the heat-pump equipment during the periods when excess capacity exists over and above that required for heating the structure.

The heat-pump output and the structure heat loss, on the three days chosen as a basis for the storage tank, can be obtained from Fig. 2 and tabulated in the form given by Table 2.

Heating for a 24-hr. period would require a total of $24 \times 236,000 = 5,660,000$ B.t.u. additional heating capacity. In obtaining this figure, the storage and thermal flywheel action of the structure was not considered nor was the internal heat gain, including lights, people, and sun effect, taken into account.

Also the quantity of ventilation air, used in the heat-loss calculation, is approximately twice what would be obtained by natural infiltration and probably could be considerably reduced during the extremely cold days without ill effect. If the ventilation air is reduced 50%, it would reduce the additional heating capacity required by 2,000,000 B.t.u.

The extent to which the storage and thermal flywheel effect of the structure and the internal-heat gain will influence the estimated additional heat required is a matter of individual judgment. Based on our experience with similar installations, the heat required at the extreme temperature will be considerably below that indicated by the conventional heat-loss-calculation method.

Just how much or how little depends on a number of factors, such as size, type of construction, usage, size and type of windows, amount of insulation used, etc.

Taking all these factors into consideration and keeping in mind that the occurrence of three similar days of extreme temperatures is very infrequent, a 384-cu. ft. storage tank was selected which will supply 1,920,000 B.t.u. additional heating based upon an 80° F. temperature range.

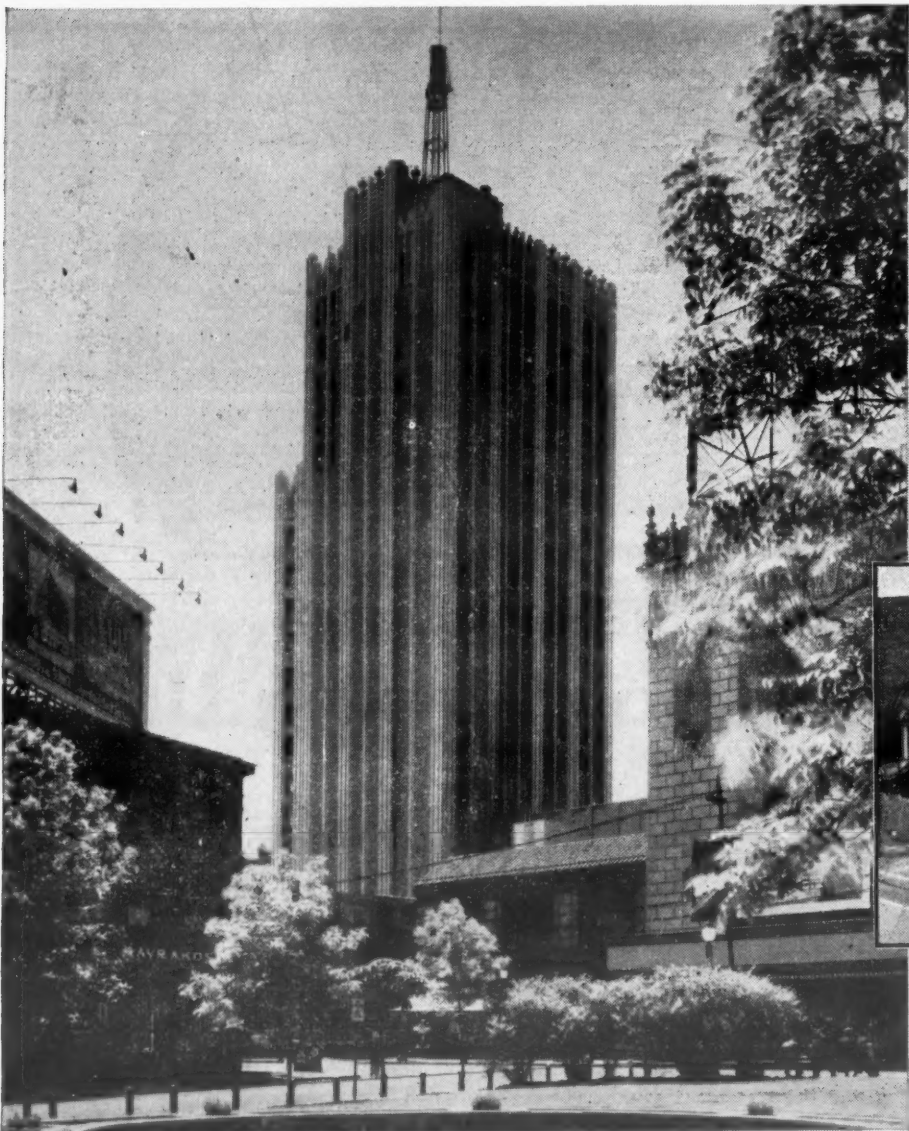
The controls are so adjusted that the heat pump will raise the water to 120° F., and a 15-kw. electric-resistance heater will raise the temperature from 120° to 160° F. or 180° F. as required.

The conditioned air is distributed to the several zones of the building by means of galvanized-iron ducts. The air is returned through grilles located in the outside walls near the floor (usually underneath the windows), which connect to a horizontal duct below the floor by means of wall chases.

A blow-through type conditioner unit is employed. In this design, the conditioner fan delivers the outside-recirculated air mixture through the filters, then over the conditioner coil,

(Continued on next page)

BUILDING for BIG BUSINESS



Pictured above is one of the 25-horsepower Wagner Polyphase Motors that drive the compressors in this system. Twenty-eight additional Wagner Motors are used in the complete installation.

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house their branch offices, is the fact that they realize how year 'round air conditioning increases employee efficiency.

The air conditioning engineers who installed the system in this building know that a modern "weather plant" can function properly only if it is equipped with dependable, efficient motors. That's why Wagner Quality Motors were chosen for this job, as they are for thousands of industrial, commercial and home applications.

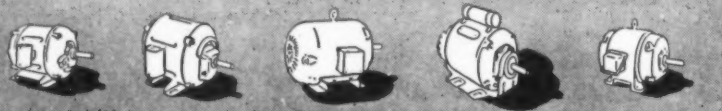
Wagner Motors are famous for their sturdy dependability and efficient opera-

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Schematic Diagram Shows Heat Pump Piping

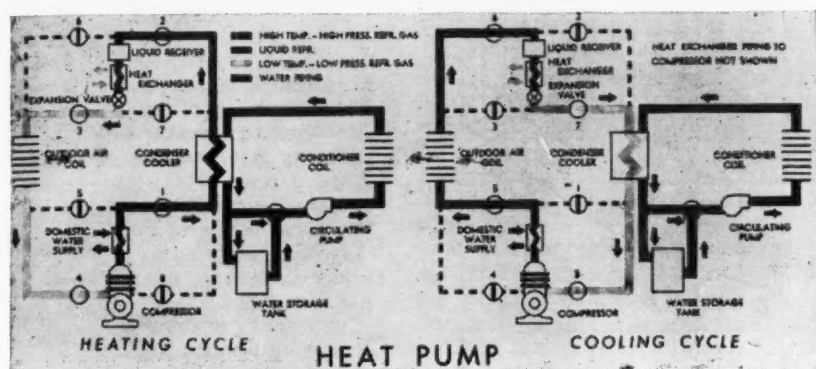


Fig. 3 shows schematically how the Tidd plant's heat pump operates on both the heating cycle and the cooling cycle.

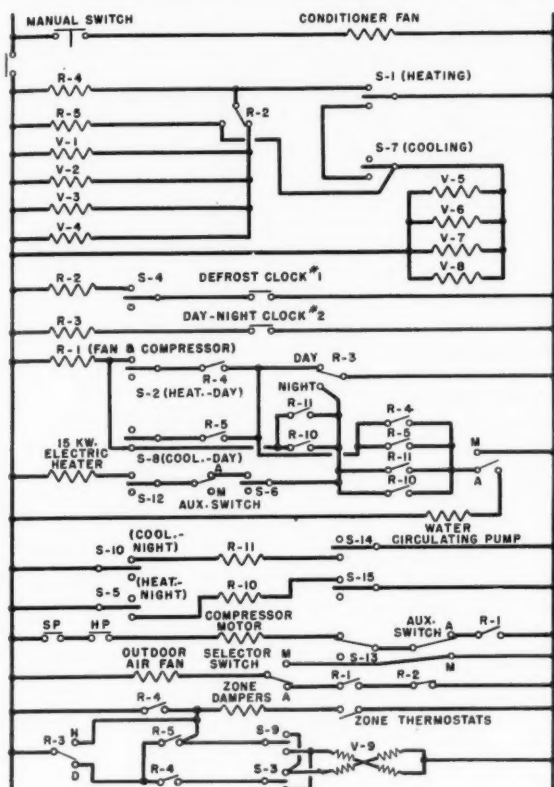


Fig. 4—This is the electric control diagram for the heat pump in the control room of the Tidd plant. Functions of the various controls and their sequence of operation are outlined in the accompanying text.

Operating Cycles of Heat Pump Outlined

(Continued from preceding page)

or through the by-pass into one of two plenums. The zone thermostats, by controlling the operation of the two dampers located in the plenums, regulate the temperature of the supply air.

The unit used to absorb the heat from the outdoor air consists of a coil, fan, and housing. During the heating cycle, the air is taken in from the outside, over the coil where heat is given up to the refrigerant, then discharged by the fan back to the outside. During the cooling cycle, or during the defrosting cycle, the outdoor coil is used as an air-cooled condenser.

Fig. 3 is a schematic diagram of the refrigerant and water piping of the heat-pump system using water storage. During the heating cycle,

valves 1, 2, 3, and 4 are opened and 5, 6, 7, and 8 are closed. Compressed refrigerant gas passes through the refrigerant-water heat exchanger to the coils of the condenser-cooler where it is condensed, giving up the latent heat of condensation to the circulating water.

The condensed refrigerant passes on to the liquid receiver, then through the heat exchanger, expansion valve, and outdoor coil, where heat is absorbed from the outdoor air. From the outdoor coil, the refrigerant goes through the liquid-gas heat exchanger and then returns to the compressor.

During the cooling cycle, valves 1, 2, 3, and 4 are closed and valves 5, 6, 7, and 8 are opened. Compressed refrigerant gas passes through the refrigerant-water heat exchanger to the outdoor-air coil, where it is condensed, giving up its latent heat of condensation to the outdoor air.

The condensed refrigerant passes on to the liquid receiver, the heat exchanger, then through the expansion valve to the coil of the condenser cooler where the heat of vaporization is absorbed from the circulating water. From the condenser cooler, the refrigerant gas goes through the liquid-gas heat exchanger and then returns to the compressor.

During the defrosting cycle, the path of the refrigerant is the same as the cooling cycle, going first to the outdoor-air coil, then on to the liquid receiver and heat exchanger, through the expansion valve to the condenser cooler, then back to the compressor.

The high temperature-high pressure refrigerant gas from the compressor passes through a heat exchanger in going to the condenser cooler during the heating cycle, or to the outdoor coil during the cooling cycle. This heat exchanger is in the domestic hot-water circuit. In this manner the refrigerant gas is used to heat the water used for domestic purposes in the building.

Circulation of the water by the pump from the condenser cooler and/or storage tank, through the conditioner coil in a closed circuit, is the same during the heating, cooling, and defrosting cycles. The only difference is that, during the heating cycle, hot water is circulated, and, during the cooling cycle, cold water is circulated.

The electric-control diagram for the operation of the heat pump system is shown in Fig. 4. After manual switch No. 1 is closed, starting the conditioner supply fan, the system is completely automatic year-round.

When the outdoor-recirculated air temperatures drop below the setting

(Concluded on next page)

★ NUMBER TWENTY ★

Air Conditioning Is Positive

IN THE PAST, industrial air conditioning has had a rather negative function—the ducking of discomfort, or the avoidance of spoilage. In the future we shall see its use grown enormously, and for *positive* reasons.

For example: in factories, it will *make possible* many new processes. And in the comfort field it will keep men working at peak efficiency—even in seasons and in climates which heretofore have been conducive only to lassitude and “gold-bricking.” In the areas of labor relations, of plant productivity, and of worker efficiency, the air conditioning of *people* is slated to assume an importance far beyond anything we have hitherto known.

Furthermore, the air conditioning of materials is an infant prodigy. Incubated during and by the late war, this infant prodigy should grow to full stature during the next few years.

Here the physicist and the chemist enter. From the Bunsen burner and the forge these scientists are turning to the air conditioner in their magic manipulations of metals and synthetics. They are learning much about the effect of low temperatures upon molecular structure. They are learning that they can make materials (figuratively) jump through hoops by the use of cooling and humidity-control.

In the factories of the future, air conditioning will open up new processes, new methods, new materials. It will cut man-hours, reduce costs, make new products possible. For example:

Precision measuring devices retain their prescribed dimensions and shape only after all internal strains are removed, and after their crystalline structure is artificially “matured” so as to prevent growth. Properly controlled temperatures and humidity take care of this “maturing.”

Another “for instance”:

After performing all but the last few operations (grinding and lapping) in the finishing of steel shapes it has been customary to season these stampings over long periods of time to prevent infinitesimal alterations. By utilizing air conditioning, an equivalent stabilization of steel “forms” now can be secured in a few hours. This achievement formerly took weeks, months, and even years. The saving in time and material consumption is obvious.

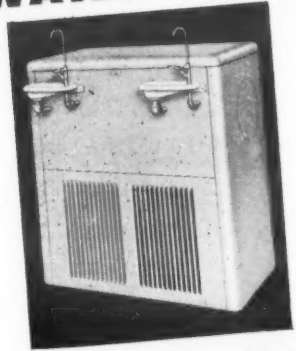
Here again the smart dealer will capitalize upon the revelation of these convincing advantages of air conditioning in industrial processing. He will see that air conditioning contributes to more efficient manufacturing, and he will try to get production managers to see it, too.

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March 1, 1948 Discount Sheet and Supplement
Mailed on Request.

Utility Gives Pump's Performance Data

(Concluded from preceding page)

of ductstat S-1, the system is positioned to the heating cycle by opening valves V-1, 2, 3, and 4, and by energizing relay coil and closing contacts R-4.

The closing of contacts R-4 operates the water-circulating pump and allows immersionstat S-2, located in the discharge of the condenser cooler, to control the supply of the hot water for the conditioner coil by operating the compressor motor and the 5-hp. outdoor-air fan motor.

Immersionstat S-3, set approximately 3° F. lower than S-2, controls the operation of three-way valve V-9 to allow the use of the higher-temperature water from the storage tank when the refrigerating compressor is unable to maintain the desired water temperature to the conditioner coils.

The zone heating thermostats T-1, 2, 3, and 4, will control the operation of their respective damper motors. These controllers will be in operation on a call for heat by S-1.

Clock switch No. 1 will control automatically the defrosting of the outdoor-air coil. When the outdoor-air temperature is lower than the 35° F. setting of S-4 and the clock switch contacts are closed, the relay coil R-2 will be energized to stop the outdoor-air fan, close valves V-1, 2, 3, and 4, and open valves V-5, 6, 7, and 8.

When the outdoor recirculated air temperature rises above the setting

of ductstat S-7, the system is positioned to the cooling cycle by opening valves V-5, 6, 7, and 8, and by energizing relay coil and closing contacts on R-5. The closing of contacts R-5 operates the water-circulating pump and allows immersionstat S-8, located in the discharge of the condenser cooler, to control the supply of cold water for the air conditioner coil by operating the 15-hp. refrigerating compressor motor and the 5-hp. outdoor-air fan motor.

Immersionstat S-9, set approximately 3° F. higher than S-8 controls the operation of three-way valve V-9 to allow the use of lower-temperature water from the storage tank when the refrigerating compressor is unable to maintain the desired water temperature to the conditioner coils.

The zone-cooling thermostats T-6, 7, 8, and 9, will control the operation of their respective damper motors. These controllers will be in operation on a call from cooling from S-7.

When the outdoor temperature is below the setting of ductstat S-15 during the heating cycle, or above the setting of S-14 during the cooling cycle, the storage tank will be charged with warm or cold water under control of S-5 or S-10.

Table 3 gives the typical performance data for the heat-pump system when operating on the heating cycle at an outdoor temperature of 30° F. The storage tank was not being used when this data was taken. Because of the difficulty of measuring the heat supplied to the domestic hot water, this was not segregated from the heat supplied for building heating.

The data given in Table 3 covers the first of several performance tests which will be made on this heat-pump system to determine its performance

Performance Curves

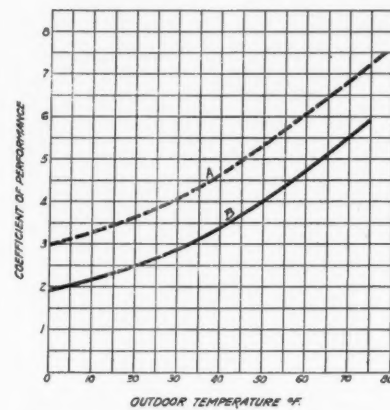


Fig. 5—Coefficient of performance for the Tidd plant heat pump at various outdoor temperatures is indicated above, Curve A being the average c.o.p. for the compressor alone, Curve B showing the average c.o.p. for the electrical input to compressor motor, water circulating pump, and outdoor fan motors.

under various operating conditions, and to determine what changes can be made to improve its operating efficiency.

The data in Table 3 was used, together with manufacturer's compressor and coil performance data, to estimate the coefficient of performance at various outdoor temperatures, as given in Fig. 5. It must be kept in mind that this figure represents only the estimated coefficient of performance based upon one performance test and is subject to revision when additional tests are made.

Table 3 gives a compressor condensing temperature of 98° F., which may be used for outdoor temperature of 30° F. and lower. Above 30° F. outdoor temperature it is believed a 90° F. condensing temperature will be satisfactory, which will raise the coefficient of performance figures given in Fig. 5.

It is difficult to predict just what effect the storage tank will have on the average coefficient of performance until several more performance tests are made. It is estimated that a coefficient of performance of 3.63 (including all auxiliary equipment) can be obtained when the water in the storage tank is heated to 120° F. on a 40° F. outdoor day.

The 3.27 kw. used by the outdoor fan materially reduces the coefficient of performance, as indicated by curve B in Fig. 5. The coefficient of performance rises quite sharply as the outdoor temperature rises, mainly because of the increased compressor efficiency at the higher suction pressures.

Because of the reduction in coefficient of performance, due to the outdoor fan, it appears a higher average performance could be obtained if provision were made to reduce the fan capacity at the higher outdoor temperature and thereby reduce the electric consumption of the fan motor.

It appears that the efficiency of the compressor drops appreciably at the lower refrigerant temperature, accounting in part for the low coefficient of performance at low outdoor temperatures. Using a system employing a more suitable refrigerant

Table 3—Typical Performance
Data for Tidd Heat Pump
System*

Conditioner coil:	
Air circuit:	
Cubic feet per minute	10,750
Entering temperature, °F.	67.5
Leaving temperature, °F.	80.0
Water circuit:	
Gallons per minute	47.0
Entering temperature, °F.	88.2
Leaving temperature, °F.	82.0
Outdoor coil:	
Air circuit:	
Cubic feet per minute	14,850
Entering temperature, °F.	30.0
Leaving temperature, °F.	21.8
Condenser-cooler:	
Water circuit:	
Gallons per minute	47.0
Entering temperature, °F.	82.0
Leaving temperature, °F.	88.2
Electric consumption, kw.:	
Compressor motor, 15 hp.	11.70
Water-circulating-pump motor, 3/4 hp.	0.51
Conditioner fan motor, 7 1/2 hp.	4.49
Outdoor fan motor, 5 hp.	3.27
Compressor:	
Head pressure, (98° F.) p.s.i.	114
Suction pressure (19° F.) p.s.i.	19
Refrigerant effect (including liquid sub-cooling), B.t.u. per hr.	120,000
Heat output total B.t.u. per hr.	156,000
Coefficient of performance:	
Using kilowatt input to compressor	4.02
Using total kilowatt input (except conditioner fan motor)†	2.93

*During heating cycle on 30° F. day.

†Sixty per cent of kw. input to water circulating pump included as useful work.

or a different design of compressor valves would probably improve this.

The type of refrigerant valves first installed was found to be unsatisfactory owing to the high pressure drop caused in the refrigerant circuit. Valves selected for this type service must be free-acting with a negligible pressure drop to refrigerant flow.

The average coefficient of 3.5 is believed to be conservative. By a better setting of the temperature controllers, more effective use of the storage tank at higher outdoor temperature, and a reduction in electric power consumption to the outdoor fan motor, it is felt that the coefficient of performance can be materially increased.

It is apparent that the load factor on a heat-pump system, using storage, will be improved materially because of the possibility of using equipment of smaller capacity operating for longer periods to satisfy a given load.

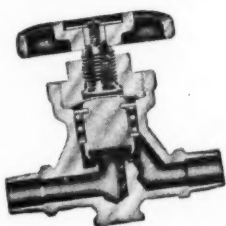
It is not the intent of the authors to state that the heat pump, using water storage and air as the heat source, will result in practical applications in all cases. Experience gained elsewhere indicates that this type of system has many advantages over an air system without a storage tank, both in satisfaction of operation and higher efficiencies.

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Superior ANGLE VALVES

CATALOG NUMBER	CONNECTIONS	LIST PRICE EACH	NET WT. EACH LBS.	CODE WORD
	SAE Flare Male Pipe			
104-4B	1/4"	\$5.00	.75	Lefom
104-4C	1/2"	5.00	.75	Lefro
104-6B	3/8"	5.00	.75	Lefus
104-6C	1/2"	5.00	1.00	Legas
105-8B	3/4"	5.00	1.00	Legon
105-8C	1"	5.00	1.25	Lejac
106-10D	1 1/4"	6.00	1.25	Lekad

Superior LINE SHUT-OFF VALVES*

CATALOG NUMBER	CONNECTIONS	LIST PRICE EACH	NET WT. EACH LBS.	CODE WORD
	SAE Flare			
204-4	1/4"	\$5.30	.9	Lelim
204-6	1/2"	5.30	1.25	Lelot
205-8	3/4"	5.30	1.5	Lemal
206-10	1"	6.60	1.5	Lemojo
	O.D. Sweat			
204-4S	1/4"	5.30	.9	Lemuz
204-6S	1/2"	5.30	1.25	Lenag
205-8S	3/4"	5.30	1.5	Lenek
206-10S	1"	6.60	1.5	Lenov

Superior BRANCH SHUT-OFF VALVES*

CATALOG NUMBER	CONNECTIONS	LIST PRICE EACH	NET WT. EACH LBS.	CODE WORD
	SAE Flare			
304-4	1/4"	\$6.25	1.00	Lepem
304-6	1/2"	6.25	1.00	Lepuc
305-8	3/4"	6.25	1.50	Lepwe
306-10	1"	7.50	1.75	Leraj
	O.D. Sweat			
304-4S	1/4"	6.25	1.00	Lesok
304-6S	1/2"	6.25	1.00	Lesoz
305-8S	3/4"	6.25	1.50	Lelap
306-10S	1"	7.50	1.75	Leluf

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The Nat Corporation also manufactures the NAT Suspended Gas-Fired Unit Heater

RSES-REMA Program--

(Concluded from Page 1, Column 3)

Speakers will include H. F. Hildreth, Westinghouse Electric Corp.; Paul B. Reed, international educational director of RSES; H. F. Spoehrer, Sporlan Valve Co., and Dan Wile, Refrigeration Engineering, Inc.

The full program of events follows:

FRIDAY, APRIL 30

9:00 a.m.—Men's registration, main lobby; ladies' registration, Royal Suite.
12:00 noon—Official opening of Exhibit Hall.

Afternoon—Ladies' tour of Gump's Art Collection, including one of the world's most treasured Jade collections.

10:00 p.m.—Exhibit Hall closes.

SATURDAY, MAY 1

9:00 a.m.—Men's registration, main lobby; ladies' registration, Royal Suite.
9:30 a.m.—Opening of Educational Sessions and Introduction of Guests and Dignitaries.

10:00 a.m.—H. F. Hildreth, Westinghouse Electric Corp., "The Refrigeration Service Engineer and His Place in the Industry."
11:00 a.m.—Paul B. Reed, International Educational Director RSES, "Compressor Seals, Their Replacement, Repair and Application."

12:00 noon—Exhibit Hall opens.
Afternoon—Ladies' fashion show and tea, Royal Suite—floral arrangements, hair styling, women's fashions.

6:00 p.m.—Exhibit Hall closes.
7:00 p.m.—Annual dinner, Palm Court.
9:00 p.m. to 1:00 a.m.—Dancing.
9:45 p.m.—Floor Show.

SUNDAY, MAY 2

9:30 a.m.—Men's registration, main lobby; ladies' registration, Royal Suite.
10:00 a.m.—Educational session—H. F. Spoehrer, Sporlan Valve Co., "REMA-RSES Relationships" and "Dessicants."

11:00 a.m.—Dan Wile, Refrigeration Engineering, Inc., "Evaporative Condensers and Heat Exchanging Principles."
12:00 noon—Exhibit Hall opens.

5:00 p.m.—Exhibit and Conference closes.
Note: Facilities will be available for special tours that the ladies might care to take, such as the California Spring Garden Show held at the Oakland Art Gallery. These tours may be arranged for by the individuals.

FTC Ban on Word 'Free' Rapped In ANA Opinion

NEW YORK CITY—The Federal Trade Commission has no power to curb use of the word "free" in advertising when such use is free of deception, the Association of National Advertisers opined in a letter to the National Better Business Bureau recently.

Isaac W. Digges, counsel for ANA, wrote that "in our opinion, there is nothing inherently evil in the adjective 'free' and the Commission has no jurisdiction to ban its use except under circumstances which would cause deception or mislead the public."

"There is much to be said for the proposition that in some circumstances the word lends itself to misleading usage and that the Commission's interpretation is well designed to cope with those situations."

"That does not mean, however, that the Commission's prescription for eliminating deception even in those cases (i.e. by complete non-use of the word) is the only one."

"Conceivably, the word might be used and, when coupled with adequate explanation, all tendency to confusion or deception be eliminated. Where this can be accomplished, the commission has no power to prevent it."

"We conclude, therefore, that the commission's ban is too broad and indiscriminating; that an advertiser may well examine the circumstances of this particular use of the word 'free,' and if he is confident that it is free of confusion and deception, he need not adhere to the commission's all-inclusive prohibition."

Leo Schirtzinger Retires After 38 Years with Century Electric

ST. LOUIS—Century Electric Co. here announces the retirement of its Cincinnati district sales manager, Leo Schirtzinger, who had been associated with the firm for 38 years.

P. F. Williams and W. C. Wetlauffer will handle the Cincinnati office.

Dealer Insures Purchasers If Appliance Price Drops

LOWELL, Mass.—Customers of the Quinn Stove & Appliance Co. who have purchased an appliance since March 4, 1948 are insured against any price reduction that the manufacturer might make in that product before July 31, 1948, according to store officials.

If such a price reduction should occur, the customer will be refunded "in cash, unconditionally" the amount of the reduction, the store has guaranteed.

Of course, store officials believe that prices are more likely to go up than down.

Detrola 'Loans'--

(Concluded from Page 1, Column 5)

manufacturers had "loaned him millions of dollars without interest to get promises of steel from the corporation's rolling mill at Newport, Ky."

According to spokesmen for International Detrola, the so-called "loans" were really advance payments on contracts for the purchase of steel.

Involved were Bendix Home Appliances, F. L. Jacobs, Philco Corp., Borg-Warner Corp., Jack & Heintz Precision Industries, Prentice-Wabers Co., Neon Products Co., Houdaille-Hershey, and Packard Motor Car Co.

Back in 1946 after International Detrola had acquired the assets of the Andrews Steel Co. at Newport, Ky., the former made contracts with some of these companies covering the loan and the purchase of steel for three years, it was explained.

Each lent money without interest equal to approximately one-tenth of the purchase price of steel. As the steel was delivered, these monies were credited toward the purchase.

There were three such deals. In the first the following companies signed three-year contracts and made the following "loans": Bendix, \$500,000; F. L. Jacobs, \$500,000; Jack & Heintz, \$500,000; Philco, \$600,000; Prentice-Wabers, \$120,000, and Neon Products, \$90,000.

In the second deal, Borg-Warner came in with a \$1,200,000 contract covering 18 months and being equivalent to about 20% of the purchase price. This contract was made some time after the original deal.

The third happened about three months ago. In January of this year, new contracts were made with Borg-Warner, Houdaille-Hershey, and Packard which involved approximately \$5,000,000 in "loans."

International Detrola had just previously purchased a war surplus steel plant in Kentucky, which was, incidentally, completely surrounded by Detrola property. This plant was never completed and never operated during the war, and the \$5,000,000 will be used to help finance the completion and enlarging of the plant's steel-making facilities, it was announced.

Only a fraction of the output will be taken up by the three companies, which have made contracts with Detrola as follows: Borg-Warner, \$2,225,000; Packard, \$2,225,000, and Houdaille-Hershey, \$500,000.

Feldman also told the congressional committee that International Detrola itself by Aug. 10, 1946 had spent \$3,768,496.20 as its original investment in the steel plant.

Since then, he said, Detrola has invested another \$4,753,349.54, and as of Feb. 28, 1948, its total investment in steel plant facilities amounted to \$8,521,845.74.

Congressman Macy of New York, chairman of the committee, issued a previously prepared statement about three minutes before the hearings were concluded saying, "the practices we have heard related are indefensible."

The committee admitted, however, that these practices were strictly legal.

Mills Creditors--

(Concluded from Page 1, Column 5)

The present committee asserted that Frederick Nymeyer is no longer employed as consultant at the Mills plant and that negotiations are currently under way to secure a general manager for operation of the business.

Reporting on the financial condition of the company, the creditors' committee declared:

"The audit shows an operating loss of \$1,624,000 for the year ended Dec. 31, 1947, which includes provision for possible settlement on contracts by setting up a reserve of \$750,000 and an inventory adjustment of approximately \$800,000."

"Sales for the two month period ending Feb. 29, 1948, amounted to \$2,804,145, resulting in a loss of \$88,669; this includes depreciation charged off of approximately \$100,000."

"In order to permit the company to operate on a strictly current basis, the company negotiated an additional loan of \$400,000 from the bank and finance company, with Court approval, and at this date (March 30) the company has received \$300,000 of the authorized loan of \$400,000."

Members of the creditors' committee are:

F. E. Gibson, Graybar Electric Co., chairman; Nolan Browning, vice president, Bank of America; F. J. Sherwin, The Chicago Hardware Fdry. Co.; R. T. Anderson, Operadio Mfg. Co.; L. W. McBride, Wagner Electric Co.; Earl Diehl, Westinghouse Electric Co., and James S. Cox, secretary.

Retail Advertising Hits Peak In Newspapers of 9 Cities

NEW YORK CITY—Total newspaper retail advertising lineage in February, 1948 increased 22% over that of February, 1947, and set a record far exceeding the best marks reached in pre-war years, according to George Neustadt, Inc., an organization that measures retail newspaper advertising in nine key cities.

Neustadt pointed to the filling up of merchandise supply lines as one cause for the unprecedented demand for newspaper advertising space by retailers. Cities from which data was drawn are Chicago, Cleveland, Detroit, New York, Brooklyn, Philadelphia, Pittsburgh, St. Louis, and Washington, D. C.

Kobrin Refrigeration Set Up

LOS ANGELES—Kobrin Refrigeration Co. is the firm name under which Louis M. Kobrin has published a certificate that he is conducting business at 1108 West Second St., Los Angeles.

Charge of Lottery--

(Concluded from Page 1, Column 2)

"Open House Hospitality Week" during which 30,000 St. Louisans were invited to visit the appliance showroom.

Celebrating the first anniversary, E. H. Woestendiek, president of the company, planned to give away \$1,000 in major appliances. The program involved only the filling out of a card by each visitor to the store, with no obligation to make a purchase, and depositing the card in a box. Subsequently there was to be a drawing.

However, after the program was announced in newspaper advertisements, direct mail, etc., Woestendiek received a warning from the St. Louis police department that the plan was a lottery, and it was subsequently abandoned.

"Instead of giving away the appliances, we auctioned off the prizes, inviting everyone to come in and attend the auction," Woestendiek smiled. "We then gave all of the proceeds from the auction to the American Red Cross drive."

ENGINEER WANTED

We require an assistant chief engineer for a permanent position with the following qualifications:

Graduate engineer. Thorough knowledge of rating refrigeration and air conditioning coils. Practical field experience covering coil and compressor problems. Must be aggressive and ambitious. Age 30 to 40 years.

The position is one of responsibility, and an excellent opportunity awaits the man who can qualify. Give complete resume of yourself in first letter.

BETZ CORPORATION, Hammond, Indiana

COMING
APRIL 26th

The HOME and FARM FREEZER SPECIFICATIONS ISSUE

OF

AIR CONDITIONING AND REFRIGERATION News

Here is the issue the industry itself requested. This first publication of home and farm freezer specifications will fill a long-felt need of distributors, dealers, service organizations, and salesmen of home and farm freezers everywhere.

In publishing this important and useful data, AIR CONDITIONING & REFRIGERATION NEWS is continuing its leadership in the home and farm freezer field.

In Home and Farm Freezer News and Editorial Leadership

In Number of Home and Farm Freezer Advertisers

And Now With Home and Farm Freezer Specifications

Why Are Home and Farm Freezer Specifications Important?

These comparative statistics provide an important selling tool for salesmen. In competitive selling, they provide a stimulus to sales—a protection against wild claims.

This issue establishes the manufacturers who are "in it to stay," provides a check list for dealers and distributors who want complete information on competitive products.

Why the April 26 Issue Is Important to Advertisers:

Dealers and distributors want to know "who's who" in the field before making new or long-term commitments. Your advertising will spotlight your company as among those "most likely to succeed"—establish your permanent position in the industry.

Advertising will have an unusually "long life" because this issue will become a "briefcase" piece that will be used in selling for many months. Distributors and dealers order many extra copies of this issue for their salesmen.

The April 26 issue of the NEWS will have great editorial significance to the home and farm freezer industry. Your advertising will have penetrating effect because it will share readership with information vitally needed by everyone concerned with the manufacture, sale, and servicing of home and farm freezers.

EXTRA CIRCULATION

NO INCREASE IN ADVERTISING RATES

CLOSING DATE APRIL 16

Send Your Space Reservation Today



AIR CONDITIONING AND
REFRIGERATION

News

BUSINESS NEWS PUBLISHING COMPANY

450 W. FORT STREET, DETROIT 26, MICHIGAN

DISTRIBUTORS WANTED

for

ROYAL DRY BEVERAGE COOLERS

Incorporating the following features:

Rust-proof Stainless Steel Interiors—Silver Soldered Peerless Fin Coils—Delco Blowers—Sliding Hard Rubber Doors—3" Fiberglass Sealed Insulation.

IMMEDIATE DELIVERY IN 4, 6, and 8 FOOT LENGTHS

ROYAL COOLER SALES CO.

4322 Clayton Ave.
St. Louis 10, Mo.

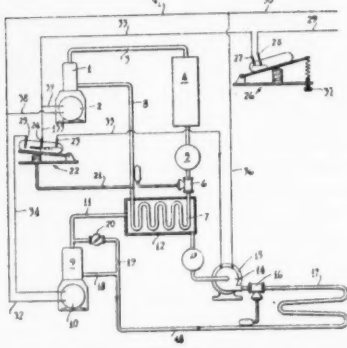
Telephone
JE 4374

Write
or
Wire

PATENTS

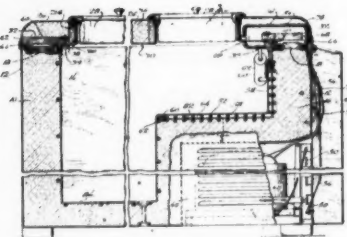
Week of January 13

2,434,221. CONTROL MEANS FOR PLURAL STAGE REFRIGERATING SYSTEMS. Alvin B. Newton, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., a corporation of Delaware. Application July 2, 1943, Serial No. 493,180. 16 Claims. (Cl. 62-4.)



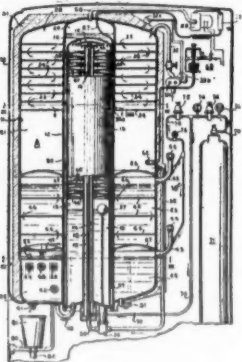
1. In a plural compressor refrigeration system having a condenser and an evaporator wherein the discharge of one compressor enters the condenser and the inlet of another compressor is supplied gaseous refrigerant from the evaporator, control means having means responsive to cooling demand for governing the operation of the one compressor, and means responsive to the operation of the one compressor for governing the operation of said other compressor.

2,434,361. TWO-TEMPERATURE REFRIGERATOR. George K. Iwashita, Indianapolis, Ind., assignor, by mesne assignments, to Admiral Corp., Chicago, Ill., a corporation of Delaware. Application July 9, 1943, Serial No. 493,993. 11 Claims. (Cl. 62-116.)



1. A refrigeration unit comprising an interior liner forming a cold compartment, means exterior to said liner for insulating it from outside thermal conditions, an evaporator coil removably mounted within the cold compartment in heat exchange contact with the interior of said liner, an integral removable primary refrigerating unit of the hermetic type including a compressor and condenser connected in series with the evaporator coil, and a secondary coil mounted exteriorly of the liner and cooled by the primary evaporator coil, said secondary coil being wound freely about the liner, whereby a portion of the cold compartment is cooled primarily by the first-mentioned evaporator coil and the remainder of the cold compartment is cooled primarily by the secondary coil.

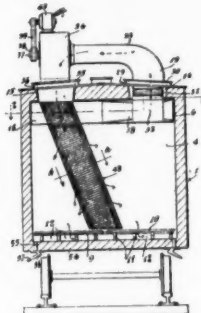
2,434,374. UNITARY REFRIGERATED CARBONATED BEVERAGE DISPENSING APPARATUS. Robert H. Tull, Springfield, Mass., assignor to Westinghouse



Electric Corp., East Pittsburgh, Pa., a corporation of Pennsylvania. Application June 1, 1943, Serial No. 489,264. 13 Claims. (Cl. 62-141.)

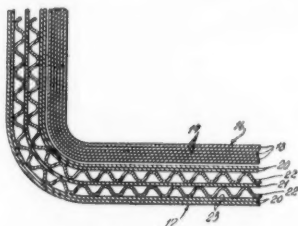
1. In apparatus for storing and dispensing a cold, mixed, carbonated beverage through a dispensing valve assembly, the combination of a unitary, structural container having partition means provided interiorly thereof for dividing the container into a chamber in which a syrup component is cooled, a chamber in which a water component is precooled, and a chamber in which the precooled water component is further cooled and carbonated, and a mechanical refrigerating system including a single refrigerant heat-absorbing unit disposed in one of said chambers and in thermal heat-absorbing relation with each of the other chambers, whereby to maintain said chambers and their contents at a temperature sufficiently low to produce a palatable mixed beverage.

2,434,432. METHOD AND APPARATUS FOR PRECOOLING FREIGHT CARS. Andrew Y. Preble, El Centro, Calif. Application March 13, 1944, Serial No. 526,301. 7 Claims. (Cl. 62-24.)



1. In apparatus for precooling a freight car having a floor grating and ice bunkers at its ends, with hatches through the car roof, and having bottom and upper openings through the bunker wall into the cargo space of the car; the combination of means for covering a portion of the upper opening through the bunker wall, a duct in the upper portion of the bunker having an inlet substantially covering the remainder of said upper opening, a duct located above the car roof and seating over the hatch opening that lies adjacent to said inlet, and means connected with the last-named duct for withdrawing air from the duct and from the cargo space through the said inlet, and for forcing the air down through the other hatch opening, through the ice in the ice bunker and back into the cargo space through the said bottom opening.

2,434,465. MANUFACTURE OF DUCTS. Henri M. Marc, Cincinnati, Ohio, assignor to The Philip Carey Mfg. Co., a corporation of Ohio. Application May 20, 1944, Serial No. 536,475. 3 Claims. (Cl. 154-83.)



1. In the manufacture of a heat and moisture-resistant duct for the transmission of gases and vapors therethrough, the step comprising integrally uniting a plurality of layers of fibrous sheet material composed predominantly of non-combustible fibers to provide a wall structure comprised in said duct by applying between said layers of fibrous sheet material a spreadable aqueous adhesive composition having a viscosity of from 300 to 1000 centipoises at 77° F., consisting predominantly of a mixture of alkali silicate and calcareous hydraulic cement and containing a retarder, said alkali silicate consisting essentially of a mixture of sodium silicate and potassium silicate, the ratio by dry weight of said soluble silicate to said hydraulic cement being between about 4 to 3 and about 1 to 2.5, from about 10% to about 40% by dry weight of said soluble silicate consisting of potassium silicate and the soluble silicate constituting about 30% to about 50% by dry weight of said adhesive composition, and drying and heat-curing the soundless layers at a temperature of about 200° F. to 700° F., thereby hardening and insolubilizing said adhesive composition in situ while carried by and between said layers of fibrous sheet material and uniting said layers into an integral rigid wall structure.

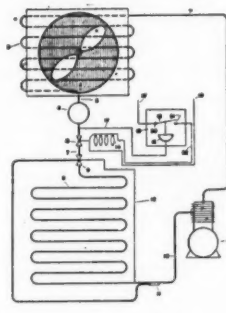
2,434,519. HEAT EXCHANGE CONDUIT WITH A SPIRAL FIN HAVING A

CAPILLARY GROOVE. Walter Raskin, New York, N. Y. Application April 18, 1942, Serial No. 439,471. 1 Claim. (Cl. 257-262.)



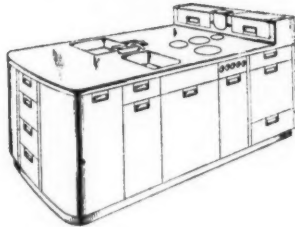
A heat exchange device comprising a tubular portion, a fin portion extending spirally about said tubular portion, said fin portion having a longitudinal slot opening along said conduit, whereby said fin portion will become part of the primary evaporator surface, the width of said slot being of such dimension that capillary attraction will cause the refrigerant to penetrate into said slot.

2,434,593. REFRIGERATION SYSTEM INCLUDING A LOAD CONTROL APPARATUS. Edward L. Schulz, Lakewood, Ohio, and Edward A. Bailey, Marietta, N. Y., assignors to Carrier Corp., Syracuse, N. Y., a corporation of Delaware. Application Feb. 2, 1946, Serial No. 645,185. 3 Claims. (Cl. 62-2.)



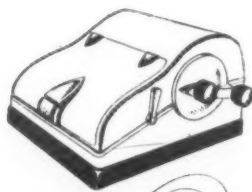
1. In a refrigeration system, the combination of a compressor, a condenser connected to the compressor, an expansion valve, a discharge line connecting the expansion valve and the condenser, an evaporator connected to the expansion valve, a suction line connecting the evaporator and the compressor, means disposed adjacent the suction line for governing operation of the expansion valve, a solenoid valve disposed in the discharge line adapted to prevent passage of refrigerant to the expansion valve, and means to operate the solenoid valve in response to an increase in condenser pressure above a predetermined level.

148,373. DESIGN FOR A COMBINATION KITCHEN UNIT. John McLeod Little, Toledo, Ohio. Application Feb. 5, 1946, Serial No. 126,280. Term of patent 14 years. (Cl. D33-19.)



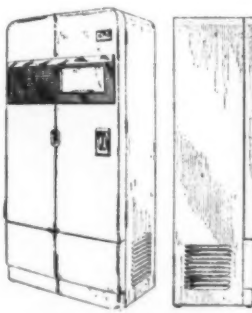
The ornamental design for a combination kitchen unit, as shown and described.

148,395. DESIGN FOR AN ICE-CREAM FREEZER. Edmond J. Spence, Montclair, N. J., assignor to Master Industries, Inc., New York, N. Y., a corporation of New York. Application May 25, 1946, Serial No. 130,070. Term of patent 3½ years. (Cl. D67-3.)



The ornamental design for an ice-cream freezer, as shown and described.

148,399. DESIGN FOR A BOTTLE VENDING MACHINE CASE. Ernest Frederick Thomson, Tuckahoe, N. Y., assignor to C. Earl Hovey, Kansas City, Mo., trustee. Application Feb. 11, 1946, Serial No. 126,482. (Cl. D52-3.)



The ornamental design for a bottle vending machine case, as shown.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$2.50 per insertion 50 words or under. 5¢ ea. additional word.

RATES for all other classifications \$5.00 per insertion 50 words or under. 10¢ ea. additional word.

POSITIONS WANTED

DO YOU have a help problem? Let us solve yours. Available—well trained selective men. These men have completed a course of 34 weeks consisting of practical shop refrigeration. Send for our records. Well trained men for a good job. Available for all parts of the country. THE ST. LOUIS SCHOOL FOR ELECTRICITY AND REFRIGERATION, INC., 6767 Southwest Avenue, St. Louis, 17, Mo.

REFRIGERATION ENGINEER, service, design, erection manager. Scandinavian, high technical education, 15 years experience in sales, design, erection and maintenance of domestic, commercial and ship refrigeration and partly air conditioning installations. 10 years management in one firm. Excellent references. Desire position, prefer West Coast, willing to travel. BOX 2762, Air Conditioning & Refrigeration News.

MANUFACTURERS REPRESENTATIVE would like to hear from manufacturers desiring coverage of original equipment manufacturers in Eastern Pennsylvania, South Jersey, Delaware, Maryland and Virginia Eastern shore. Twenty five years experience commercial refrigeration and air conditioning. BOX 2764, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

COMMERCIAL AND industrial refrigeration and air conditioning installation and servicemen with at least 3 years experience. 40 hour week, company trucks furnished. \$1.80 to \$2.00 scale. DRESCO REFRIGERATION COMPANY, 4404 Woodward, Detroit 1, Michigan.

WANTED, REFRIGERATION service man capable of taking over service and installations for McCray Dealer. Call YPSILANTI 2426. Reference required.

FIELD SERVICE Representative wanted by large Midwest appliance manufacturer. Former distributor service manager or person with field service experience. Free to travel small territories. This is an excellent opportunity with unlimited possibilities for advancement. Write, stating complete history, references, background and experience. Replies held confidential. BOX 2747, Air Conditioning & Refrigeration News.

COMMERCIAL REFRIGERATION Serviceman—For aggressive sales and service company located in Northern Ohio. Experience in commercial and air conditioning. Union wages. BOX 2750, Air Conditioning & Refrigeration News.

SOUTH AMERICAN distributor for nationally known manufacturer of air conditioning and refrigeration equipment has an opening for a well qualified sales engineer having had experience in design, layout and erection of ammonia and "Freon" refrigeration and air conditioning systems. Must organize office and service procedure. Permanent residence abroad. Good salary and bonus. Write, stating qualifications and previous experience. BOX 2751, Air Conditioning & Refrigeration News.

SALESMEN—FOR aggressive sales organization located in Northern Ohio. Experience in air conditioning and commercial refrigeration. Salary and commission. Excellent opportunity. Our men know of this ad. State previous experience. BOX 2754, Air Conditioning & Refrigeration News.

REFRIGERATION ENGINEER: Nationally known refrigeration manufacturer looking for refrigeration, mechanical, or electrical engineer with about five years experience in refrigeration design and development. Will pay salary commensurate with ability. Write full details of qualifications, experience, and salary expected. Enclose photos. Write BOX 2755, Air Conditioning & Refrigeration News.

REFRIGERATION INSTALLATION men wanted immediately. Detroit, Michigan area. Experienced only. Steady employment. Top pay. Write BOX 2763, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

SEALED UNITS rebuilt and exchanged. Prompt service on Coldspot (sealed & semi-sealed) Chieftain, Gale, Tecumseh, Norge and many others. One year guarantee. Write for price list and shipping instructions. BRIGHTON, 16640 Log Cabin, Detroit 3, Mich.

JACK & HEINTZ fractional horsepower motors. Complete line of various sizes: 1/4, 1/2, 3/4, 1-110/220 AC 60 cycles; 115/230 AC 50 cycles. Available for immediate delivery. Maximum discounts. Export Dept., J. J. CONNOLLY Co., 560 West 34th Street, New York 1, N. Y. Telephone WI. 7-2100.

HERMETIC UNITS rebuilt: Westinghouse, Norge, Frigidaire, Kelvinator, Crosley, Philco, and G. E. (except Monitor top). One year guarantee, \$35.00 F.O.B. No delays or controls included. DOLL & LEWIS, INC., 2331 Frederick Ave., Baltimore 23, Maryland.

NEW GENERAL Electric motors. 1 1/2 HP 1800 R.P.M. 230 volts 1 Ph. 60 cycle. High starting torque. Constant duty sleeve bearing. List \$88 less 20%. Also in stock 1/2 to 1 HP. EDISON COOLING CORP., 310 East 149th St., New York City, N. Y.

QUALITY BOETAIL fountains: reach-ins walk-in boxes—wood, metal; dough retarders; double duty cases—stainless steel, porcelain; dairy, florist, bakery cases; ice cream hardening cabinets; thermopane frozen food cases; milk, sandwich coolers; stainless steel back bars; with

machines. Equipment made to special order. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16, MA 2-9093.

FOR SALE at reduced prices, 2-tap all stainless steel direct draw boxes complete with blowercoil \$275 F.O.B. Chicago, Illinois. 3-tap all stainless steel direct draw boxes complete \$340. GEORGE HILGER CO. INC., 8444 So. Racine, Chicago, Illinois.

ELECTRIC WATER coolers. Bottle type, used, in good running condition. Standard make. Attractively priced. One to ten, \$50.00 each. Ten or more, \$45.00 each. Twenty-five or more \$40.00 each. F.O.B. your plant. HINCKLEY & SCHMITT, 420 W. Ontario St., Chicago 10, Illinois.

SYRUP PUMPS, highly streamlined. All stainless steel. Can be completely disassembled for cleaning. Passed by the Los Angeles City Board of Health. Available with rectangular or oval lids. Franchises available for fountain manufacturers, parts jobbers and distributors. Your inquiry invited. KELLER MANUFACTURING CO., 2425 Eads Street, Los Angeles 31, California.

3 HP CARRIERS \$310. 5 HP Mills \$395. 50 HP Schnacke less motor \$1195. 5 HP McQuay & Typhoon Weathermakers \$395. 1/2 & 1 HP Amco Weathermakers \$175 & \$195. 15 HP Larkin Evaporative Condenser \$795. The following less motors: 1/2 HP Crew & 1/2 HP Copeland units \$89 each; 1/2 HP Universals \$49 each. All new crated. PILGRIM REFRIGERATION CO., 48-20 43rd Ave., L. I. City, N. Y.

FOR SALE: 1-5 x 5 C.P. ammonia compressor. 1-4 x 4 York compressor. 1-York Y-28, 2 1/2 x 2 3/4, single cylinder, self-contained. 1-20 ton shell & tube ammonia condenser. All items in A-1 shape. PRAIRIE REFRIGERATION SERVICE, P. O. Box #243, Prairie Du Chien, Wisconsin.

SEALED CROSLLEY terminals. Installed from the outside in a few minutes without opening the compressor or removing unit. No special tools needed. Stops leaky terminals on "F-12" units. Part #1020 short model—for short Croslley terminals ("F-12" compressors with 4 mounting legs). Part #1020 long model—for long Croslley terminals ("F-12" compressors with 3 mounting legs). \$5.25 set of three. Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

COMPLETE SEALED units 1/2 H.P. for sale. Condensers are fan cooled. Complete with relay and charging valves \$45.00. Lots of 10, \$40.00 each. F.O.B. New York. Dimensions are 18" long, 15" wide, 11" high. TECHNICAL REFRIGERATION SPECIALIST'S, 362 East 180th Street, Bronx, N. Y.

(1) 4 1/2" O.D. Kerotest copper-to-copper straight-through suction shut-off valve. TIDMARSH ENGINEERING COMPANY, P. O. Box 2425, Tucson, Arizona.

KOLD-HOLD PLATES (18" x 60"). Manufacturer's surplus. Three hundred and ninety-three (393) at \$8.00 each. UNITED REFRIGERATOR COMPANY, St. Paul 1, Minn.

BUSINESS OPPORTUNITIES

EXPERT ADVERTISING counsel for small business offered, at moderate fees, by noted authority with 30 years experience (retail, mail order, national) as former executive world's largest advertising agency. A new top-flight service never before available to small business. Get more profits from your advertising dollars. Write for free booklet to JAMES D. WOOLF, Santa Fe, N. M.

DO YOU want to sell your refrigeration business? We want to buy: Long established commercial, domestic and air conditioning sales and service business, including inventory, stock of parts and supplies. Year-around business and good location essential, preferably West Coast. Give full particulars in answering. BOX 2761, Air Conditioning & Refrigeration News.

ICE PLANTS 3 to 50 ton Capacity. Freon or Ammonia. Diesel or Electric. Available with Air Agitation Equipment for Clear Ice and Storage Room Equipment. 120 Day Delivery.

BULK ICE MAKERS 250 to 2000 lb. capacity Electric Motor. Gasoline or Diesel Engine Driven Units. Prompt Delivery.

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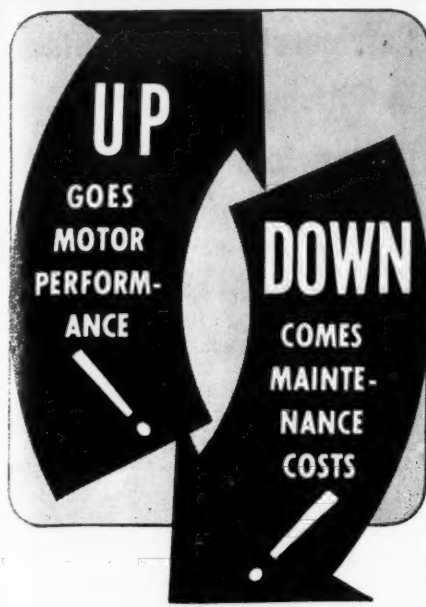
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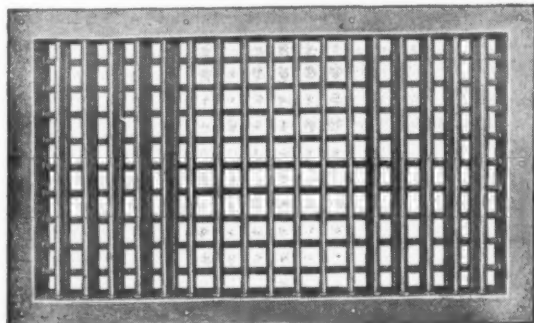


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Standard Methods, Equipment Cut Down Variables Occurring In Air Filter Tests

NEW YORK CITY—Stressing the need for a better test procedure and a better code for the rating of air filters, R. S. Farr, vice president of the Farr Co., described new test equipment that his company has developed for filters at the recent annual meeting of the American Society of Heating & Ventilating Engineers.

Farr, who with W. N. Pauley and K. A. Crismon, also of the Farr Co., developed this test method and described it in the paper, sets up six requirements for what he calls "an adequate air filter testing method." These, he said, are:

1. The test method must yield data which enables a true comparison to be made of various types of air filters operating under various conditions.

2. The method must furnish sufficient data to give an indication of the expected performance and life of air filters operating under various field conditions. The results of the tests must permit interpretation to the extent that the proper and economical filter choice can be made for any specific problem.

3. The test method must be precise in procedure and technique so that repeated tests show consistent results and that the operation of the test is entirely a matter of routine technique devoid of any element of choice of procedure.

4. The test method must be as devoid as possible of operating variables. Those variables which do exist should be recognized and properly evaluated, accounted for, and shown in the record data of the test.

5. The test method should facilitate rapid testing when using various types of air filters operating under various test conditions.

6. The test method should be an instrument to provide necessary data for basic improvement of air filter designs.

After presenting these general requirements at the session, Farr then asserted that the following should be specified in any air filter code which may be drawn up:

1. A test duct of standard construction.

2. A standard method for measuring air.

3. A standard method for feeding dust.

4. The air velocity distribution at the filter face within narrow specified limits.

5. The dust distribution at the filter face within narrow specified limits.

6. Simultaneous sampling of the upstream dirty air and the downstream clean air so that the effect of any variables occurring during the sampling will appear in the factors obtained to compute efficiency.

7. Kinds of test dust to be used. More than one type of test dust should be specified in order to approximate various operating conditions found in practice. Test dusts should be of particle size and specific gravity approximating dusts found in operating conditions.

Generally speaking, dusts should be of a particle size much smaller than those used at the present time in order to show differences between different types of equipment. All test dusts should be procured from a single established standard source

in order to preserve uniformity of the test results.

8. Test codes to be used. Test codes should be specified for air filter rating by both a weight sample evaluation method and by a dissolutor sample light penetration method. With slight alteration the same test set should be adaptable to both methods.

In describing the test apparatus developed at his company, Farr pointed out that it will handle 20 by 20 in. air filter panels. Measuring slightly over 25 ft. in over-all length and powered by a sirocco type fan, the apparatus is set up in a laboratory which is sealed and kept under positive pressure with filtered air.

Dust is introduced at four different points in the duct instead of at just one point, which is conventionally used, in order to obtain better dispersion of the dust and avoid abnormal dust concentrations, Farr explained.

Two dust samplers are used, one ahead and one after the air filter. These are made of 5/8 in. o.d. 23 gauge seamless brass tubing. Measuring 1 1/2 in. long, the facing end is open and the rear end is fitted with a 14-mesh screen. Inside of the sample is filled with Fiberglas cloth and basic fiber.

Fiberglass was used, said Farr, because its weight is not affected by changes in relative humidity, and thus before and after weighing of the samplers will give an accurate indication of the amount of dust picked up by the sampler.

Great efficiency is claimed for this dust sampler by Farr, who said that where two dust samplers have been hooked up in tandem in a heavy dust concentration, the second one showed no perceptible increase in weight, indicating that the sampler directly ahead of it had absorbed all, or virtually all, the dust.

The dust feeder developed by the authors of the papers was also described briefly by Farr. It consists of a grooved plate which moves slowly forward under a set of gears. Weighed amounts of dust are spread evenly in the four grooves of the plate, which is picked up in measured amounts by the gears and delivered by means of compressed air to the four distributing nozzles in the duct.

By means of this dust distribution method, it is claimed that the dust is evenly distributed across the face of the filter within limits of 5% either way. Air velocity distribution at the filter face is also claimed to be within 15% to 20% evenly distributed.

Alfred Meeg, Allen Putt Join Staff of Perfex

MILWAUKEE—Allen A. Putt and Alfred B. Meeg have joined the staff of Perfex Corp., manufacturer of automatic temperature controls and industrial engine radiators here, as eastern sales representative and manager of the industrial controls division respectively.

Putt, who was with Detroit Lubricator from 1925 to 1940, has most recently been manager of commercial sales for the Friez Instrument Division, Bendix Aviation Corp. He will operate from New York.

Meeg has had four years service with Westinghouse Electric Corp. and has recently been associated with the Iron Fireman Mfg. Co. He succeeds M. W. Crew who left Perfex to enter his own business.

With Allen-Bradley



DONALD L. HERR

D. L. Herr To Aid Motor Control Development

MILWAUKEE—Donald L. Herr has become associated with the engineering department of Allen-Bradley Co. to develop servo-mechanisms for machine tool and other motor controls.

Herr was formerly a lieutenant commander in the Navy in charge of the U. S. Naval Shipyard surge project at Terminal Island, Calif. A graduate of the University of Pennsylvania Herr was a Fellow of the Coffin Foundation of the General Electric Co.

He will work with Lynn Matthias, director of research.

Oregon Frozen Food Packer Completes Reorganization

ONTARIO, Ore.—The Bridgford Co., packers and distributors of Bridgford frozen foods, recently completed reorganization plans under Chap. 11, according to R. Harold Hadley, general manager, who added that the firm is broadening and strengthening its entire line of frozen foods.

A pioneer in frozen food packing, the Bridgford firm began distributing its products in San Diego, Calif. in 1934. Since that time it has constructed what is said to be one of the largest food processing plants in the country here and maintains other operations in Santa Rosa, Anaheim, and San Diego, Calif., according to the company.

George Doherty is general manager of the frozen foods division.

Big Commercial Cabinet Orders May Mean Rise In Competition

NEW YORK CITY—In announcing that orders received for frozen food cabinets and lockers have increased about 200% over January and February, Fred Rohrich, president of Frigid Freeze Sales Corp. here, opined that small community stores have begun to realize that they must modernize with frozen food cabinets in order to compete with supermarkets, it was reported in the *New York Times*.

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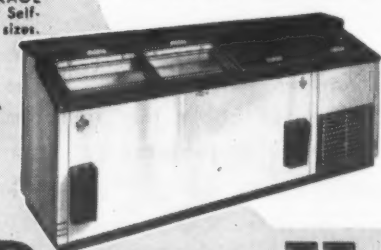
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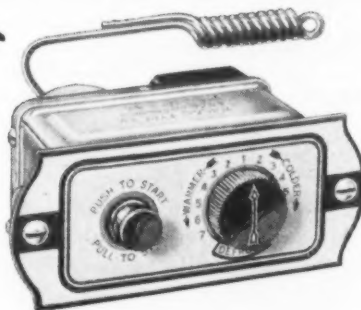
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Frigidaire Preview -- Fiberglas Corp. Ups McCord, Kuenn

(Concluded from Page 1, Column 4)

He cited the elaborate convention program, extensive training plans, and greatly-expanded factory advertising plans for newspapers, radio, magazines, and other media as evidence of Frigidaire's belief in the need for aggressive sales activity to keep the factory's employment at its present peak.

The convention was attended by distributors and branch managers from each of Frigidaire's districts and their sales, sales promotion, and service managers. Also attending were more than 40 representatives of Canadian and overseas organizations, including those from Canada, Switzerland, Malaya, Puerto Rico, Greece, France, England, New Zealand, Hawaii, Sweden, Belgium, Argentina, Cuba, and Venezuela.

The program for the first day of the meeting was a preview of 45 identical district conventions at which stage presentations, motion pictures, and playlets will be utilized to introduce the new products and plans to more than 30,000 dealers, salesmen, and servicemen.

District meetings will be conducted by five factory groups of 10 men each. The groups will be headed by the following Frigidaire executives:

Eastern region, Ellsworth Gilbert, sales promotion manager; southeastern, F. H. Peters, advertising manager; central, H. M. Kelley, appliance sales manager; southwestern, L. W. Smith, manager of the marketing department; and Pacific, W. I. Buchanan, regional manager.

Nashville Scores 22% Gain In Refrigerator Sales In Feb.

NASHVILLE, Tenn.—February refrigerator sales by local dealers registered a 22% gain over January, the Nashville Electric Service has reported. Electric range and home freezer sales showed slight gains while water heater sales continued a decline started last October.

Sales of these appliances in February by 75 dealers added up to 498 refrigerators, 407 ranges, 243 water heaters, and 13 home freezers.

TOLEDO — Owens-Corning Fiberglas Corp. has announced the appointment of J. R. McCord, former appliance sales manager, as manager of its equipment and appliance division.



J. R. McCord

W. Whitney Kuenn was named to succeed McCord as appliance sales manager.

McCord, an engineer graduate of the University of Cincinnati, has been with the company since its organization in 1938. He served in the New York sales office and as manager of the Cleveland sales office prior to his transfer to the general offices in Toledo in 1943 to assume the position of appliance sales manager.

A ceramic engineer and a graduate of Alfred university, Kuenn joined the firm in 1943. He has been associated with the appliance phase of the corporation's operations as works laboratory engineer, product development engineer, and field application engineer.



W. W. Kuenn

O'Loughlin & Co. of Newark To Distribute Laundrall

DETROIT—T. A. O'Loughlin & Co. of Newark, N. J. has been franchised to distribute the Laundrall automatic home laundry in the Newark area, the F. L. Jacobs Co. here has announced.

Omaha Cold Storage Firm Asks \$160,000 Damages From Striking CIO Union

OMAHA, Neb. — The strike-bound Omaha Cold Storage Co. here has filed a \$160,000 damage suit against the local United Packinghouse Workers of America (CIO) and 43 union members, it was announced here recently.

Unprecedented in this section of the country, the company suit charges that the firm has had to buy products outside the plant at higher prices to fill contracts, has been unable to maintain a million pounds per day tonnage in and out of the plant, and that some customers have cancelled storage contracts.

The suit also charges that the defendants have "coerced, intimidated, abused, and physically maltreated customers" and have threatened trainmen and company employees and their families.

O. J. Johnson, field representative of the union, said the workers left their jobs after two and a half months of unsuccessful contract negotiations in which a 25-cent an hour wage increase, time and half for work over eight hours, and holiday pay were demanded. He said a small crew in the refrigeration department continued working under a union agreement to prevent spoilage of food.

Falcone Manages Raymour's

SYRACUSE, N. Y. — Joseph A. Falcone has been appointed manager of Raymour's Furniture Store, furniture and appliance firm here.

Romney Shift--

(Concluded from Page 1, Column 2) served as managing director of the Automotive Council for War Production. In the same period, he was one of the organizers of the Detroit Victory Council and served as an employer member of the Labor-Management Committee of the War Manpower Commission for the Detroit area.

In 1930, he joined the Aluminum Co. of America and later represented it and the Aluminum Wares Association in Washington, D. C.

Besides directing AMA, Romney served as an officer of several national organizations of trade associations. These included the Washington Trade Association Executives, of which he was president, and the Trade Association Division of the National Industrial Council, of which he was chairman.

He has also taken an active part in international conferences. In 1946 and again in 1947, he was United States Employer Delegate and vice chairman of the 18-nation conference of the Metal Trade Industries of the International Labor office held at Toledo, and in Stockholm, Sweden.

Prominent in the civic and industrial affairs of Detroit, Romney is also a member of Michigan's Economic Development Commission, the Detroit Metropolitan Regional Planning Commission, the executive committee of the Detroit Community Chest, and the board of trustees of the Detroit Children's hospital.

He is a graduate of the Latter Day Saints university and also attended the University of Utah and George Washington university.

Refrigeration Distributors In Pittsburgh, Chicago, Boston Join NCRSA

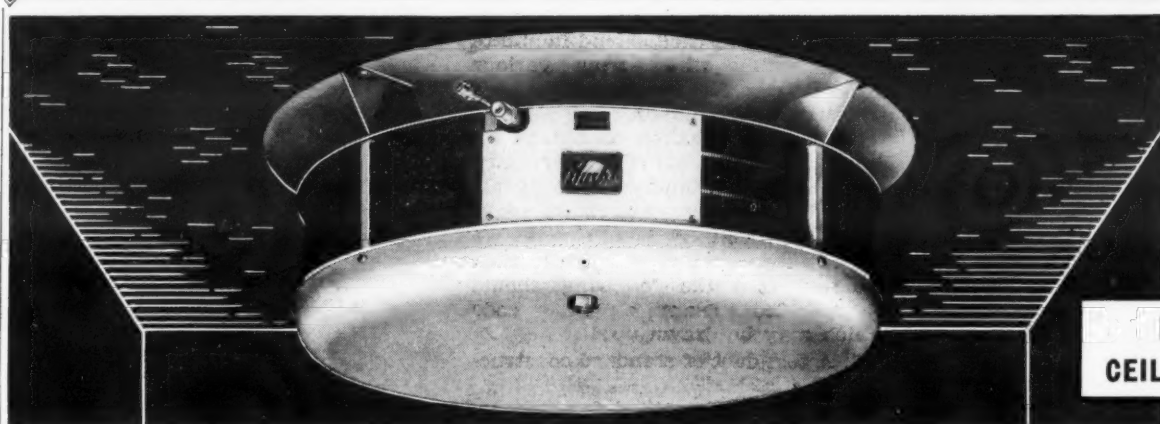
MINNEAPOLIS—Local refrigeration distributors associations in Pittsburgh, Chicago, and Boston voted during the past month to affiliate with the National Commercial Refrigerator Sales Association, R. H. Muehlberg, executive secretary of the national group, has announced.

The Pittsburgh group, called the Tri-State Commercial Refrigeration Association, was organized on March 19 under the guidance of I. Rosenberg, Jr., president of the Refrigeration Equipment Co., Pittsburgh, and a director of the NCRSA.

Meeting in the Fort Pitt hotel, local distributors decided to form an association and elected a slate of officers and directors headed by Rosenberg. Others elected were, Paul D. Sack of Sack Store Fixture Co., vice president; Paul L. Neil of Neil Supply Co., secretary-treasurer; Robert B. Weston of Weston Sales & Service, director; H. E. Schreiber of Schreiber Co., director; and Nelson D. Wagener of Butler, Pa., director.

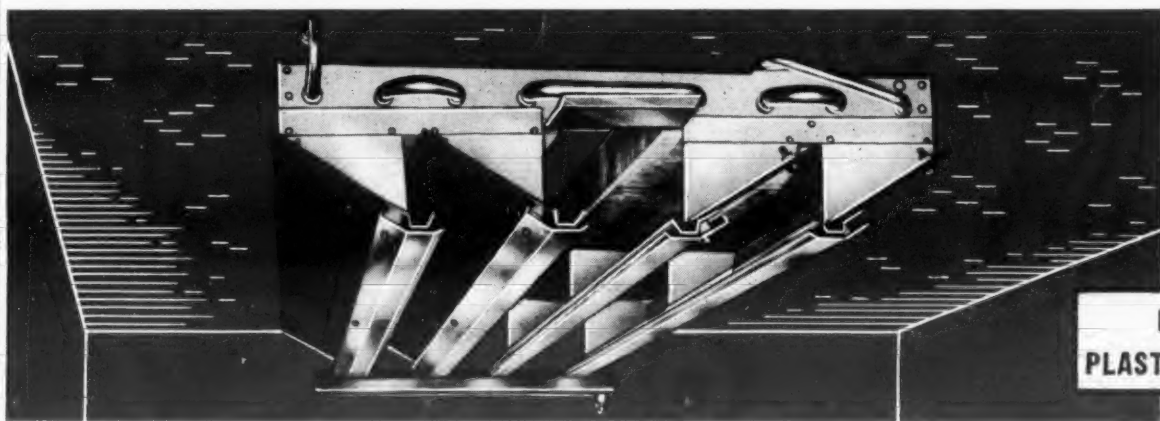
The Chicago Commercial Refrigeration Distributors Association decided on March 9 to become a local NCRSA chapter, according to Muehlberg. The group also elected Frank Murphy of McCray Refrigeration Co. president, and I. W. Shell of Lee Shell Co. secretary-treasurer.

Russell Mainstay of Mainstay Store Fixture Co., Boston, notified Muehlberg that the local Boston association had agreed to affiliate with NCRSA during its March meeting.



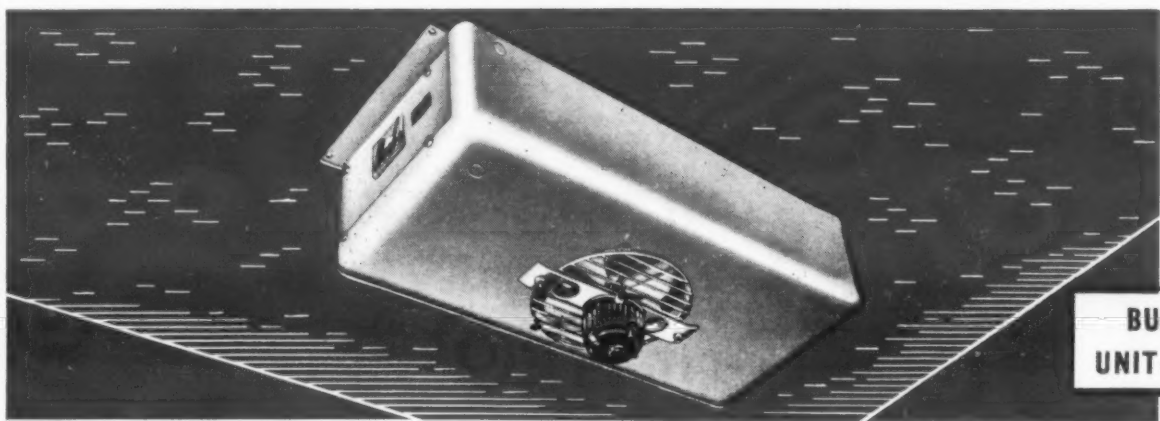
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